MacWEEK

01.15.96 *The Newsweekly for Macintosh Managers* VOLUME 10 NUMBER 2

UMAX backing SuperMac box

Radius dishes off licensing rights

By David Morgenstern

Seeking to turn up the heat on the Mac clone market, UMAX Data Systems Inc. last week showed a high-end Power Mac clone bearing the SuperMac moniker for less than $4,000.

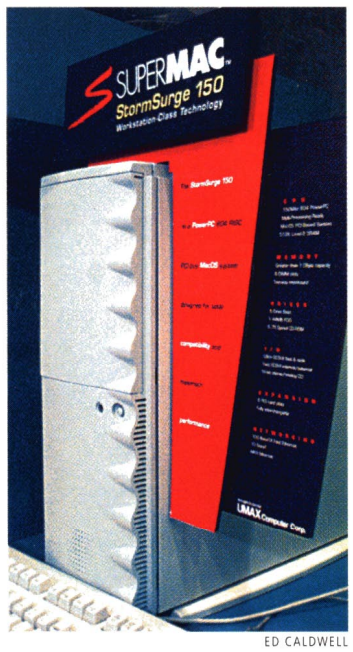
UMAX, which last November announced a Mac OS license for the Asian market, last week signed a deal with Radius Inc. to form a new company that will sell Mac OS systems in the United States. Called UMAX Computer Corp., the start-up will initially sell PCI-based clone designs developed by Radius.

UMAX said the start-up will build two PCI-based machines: SuperMac StormSurge 150, a high-performance minitower system, and SuperMac RipTide, an entry-level model. Don Chang, president and CEO of the newly formed clone maker, said StormSurge models will cost $3,500 to $4,000; RipTide models will cost from $1,800 to $2,400.

The StormSurge 150, demonstrated at Macworld Expo, will come with a 150-MHz PowerPC 604 CPU daughtercard and a slot for a second processor daughtercard. Instead of requiring users to replace their single-processor card when upgrading to multiple processors, they will be able to add another single-processor card.

UMAX said StormSurge 150 will have six PCI slots, five storage bays and 512 Kbytes of Level 2 cache. The motherboard will have 16 Mbytes of interleaved RAM soldered on it; eight DIMM (dual in-

See UMAX, Page 64



ED CALDWELL

Another clone blows into town: UMAX's StormSurge 150.

Early results are in: Apple to lose $68M

By Jon Swartz

Rumors of Apple CEO Michael Spindler's departure tore up and down the aisles of Macworld Expo last week in the wake of the company's announcement of quarterly losses, executive departures and reports of upcoming layoffs.

The source of the turmoil was Apple's statement that it expects to report a $68 million loss for its first quarter ended Dec. 29, 1995. The loss is Apple's biggest since July 1993, when it lost $188 million (see 07.19.93, Page 1). Official quarterly results will be announced Jan. 17.

At press time, a source close to the company told MacWEEK that Spindler has not been asked to step down.

Concurrent with the results, Apple is also expected to announce plans to lay off as many as 3,700 employees, more than one-fourth of its worldwide work force.

Although Apple said its unit shipments and revenues were up by more than 10 percent each, gross margins declined to 15 per-

See Results, Page 64

Apple squashes 5300 bugs

By Joanna Pearlstein

Apple last week shipped a major update to the system software for the PowerBook 5300 series that the company said addresses many of the bugs reported by users.

Posted on-line last Wednesday, the update includes a new Finder, emulator, and several control panels and extensions. The complete download is more than 20 Mbytes; the disk version comes on 14 high-density floppy disks.

Apple denied that the update, called System Enabler 1.2.1, is an early version of System 7.5.3, but sources said some of the update's features — such as the speedier Finder — are components of 7.5.3, expected to ship this spring.

Apple said the update should address several problems with the PowerBook 5300 series, including slow emulation, PC

See Update, Page 62

ED CALDWELL

This system software "fix" for the PowerBook 5300 series takes 20 Mbytes of space.

Third parties serve up Java, Internet apps

By James Staten

While Apple may not have used last week's Macworld Expo in San Francisco to unveil its Internet strategy, the rest of the Mac market did.

The myriad Internet announcements included publishing tools from Virtus Corp., FutureWave Software Inc. and DeltaPoint Inc.; serving tools from Quarterdeck Corp. and Progressive Networks Inc.; and development tools from Natural Intelligence Inc.

▸ **Quarterdeck** of Marina del Rey, Calif., made an all-out commitment to the Mac market, with StarNine Technologies Inc.'s WebStar Web server as the cornerstone of its strategy. The company last week announced a new electronic commerce kit for the application, a bundle offer,

See Internet, Page 64

Mac vendors rebound as sales, earnings jump

By Jon Swartz

John Travolta; Tony Bennett; and Jim Harbaugh, the nimble-footed Indianapolis Colts quarterback nicknamed "Captain Comeback," have proven that life sometimes offers second chances. Further illustrating this point, a handful of Mac vendors considered moribund just a year ago are bouncing back.

At Macworld San Francisco last week, plenty of corporate phoenixes were rising from the ashes. Truevision Inc., Asanté Technologies Inc., Visioneer Inc. and others have overhauled operations, found the right product mix and taken advantage of the Mac market to post financial comebacks and, in some cases, have successfully gone public.

See Vendors, Page 62

ROBERT HOUSER

Heavy activity on the slow floor mirrored the recent reversal of fortunes for several Mac vendors, such as Truevision, Asanté and Visioneer.

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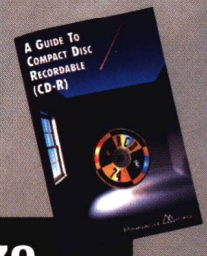

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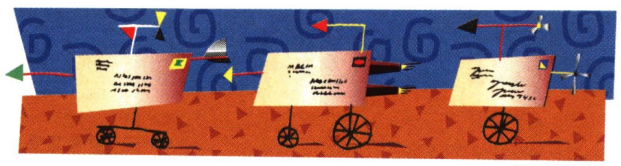
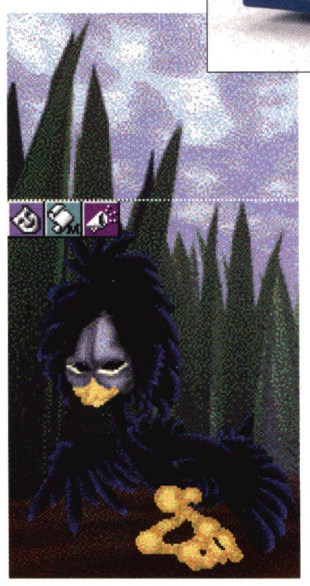
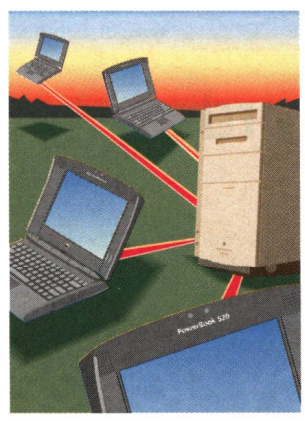


Readers weigh in on Mac bundles, Internet boxes. See Letters, Page 23.

Netopia for speed-crazed Net surfers. See Gateways, Page 16.



mTropolis multimedia authoring tool ships. See GA, Page 12.



Learning to support remote users. See Solutions, Page 33.

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33 SOLUTIONS

With more and more users computing from afar, the need for support and remote-management tools has increased.

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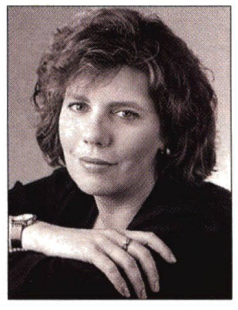
MACWEEK INSIDER CAROLYN SAID

News everywhere we look

Remember that arcade game where the alligators pop out, rearing their snouts, and you have to pound them with a mallet before they retreat? That's what it was like staying on top of the breaking news at Macworld Expo last week.

When MacWEEK decided to publish a daily edition at the expo, we were worried about the challenge of filling all those pages. The logistical and personnel issues (we produce both the daily and weekly without augmenting our staff) paled in comparison to this question: Would there be enough breaking news to cover every day of the expo?

After all, during the weeks leading up to Macworld Expo, we had hit the phones to seek out expo-related stories before anyone else knew about them — sometimes before they were more than a gleam in a product manager's eye. And our weekly expo issue, with a phone-book heft to it, already packed in every product we'd heard about. Given that we didn't want to duplicate any of the weekly coverage in the show daily, what could be left to write about?



Plenty, it turned out.

In fact, the challenge was how to cram a dozen or more new products each day, plus reports on the keynotes, parties and assorted gossip, into a mere two pages of news.

Look, incredibly low-cost PCI cards? Bang! Nailed that one. Whoops, here comes a flock of new Internet products. Triple, quadruple, quintuple bangs!

The product onslaught certainly gets your adrenaline going if you're a news hound, but it's far preferable to the reverse situation. I can remember expos that seemed more like a Nature Channel special on the miracles of underwater life, all filmed in dreamy slow-mo. Look, there's one new product floating by, shyly waving its tentacles. Maybe another one is drifting into view — no, it's just the offspring of one we saw before.

The hustle and bustle on the expo floor last week belied the numerous reports of Apple's demise as a player in the personal computer world (although it wasn't enough to camouflage the company's dismal financial performance, problems with product forecasting, management shake-ups, etc.).

After walking around Moscone Center, no one could say that the Mac has lost its edge as a platform for innovation.

The hustle and bustle on the expo floor belied reports of Apple's demise.

For one thing, it was terrific to see the promise of PCI for the Mac finally being fulfilled, with a lineup of new low-cost, high-function cards. Diamond Multimedia Systems Inc.'s Javelin AV/TV and ATI Technologies Inc.'s XClaim MM bring the price tag for digital video to an amazing new low, allowing users to get Power Macintosh 7500 functionality from a 7200 or PowerCurve machine.

For another thing, take the plethora of Web products. Of course, companies all over the computer industry are jumping on that particular bandwagon, but many vendors have come up with creative, Mac-only solutions, such as DeltaPoint Inc.'s WebVision Animator for Web-based animations, Quarterdeck Corp.'s WebStar Commerce Toolkit for commercial transaction processing and Global Stage Chat Server for Internet Relay Chat, and Natural Intelligence Inc.'s Roaster Java programming environment.

Meanwhile, two of the clone vendors, Power Computing Corp. and DayStar Digital Inc., are going great guns, and another one, UMAX Technologies Inc., is about to leap into the battle. All these developments reflect the greatness of the technology that underlies the Macintosh platform.

In fact, third parties seem to have so much more on the ball than Apple that maybe what Apple needs is for a bunch of developers to form a consortium and take it over. After all, in that alligator game, you can win by having several people cooperate on pounding the little beasties.□

Carolyn Said is MacWEEK news editor. She welcomes feedback at carolyn_said@macweek.com.

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Adobe spins off pre-press

Luminous takes on high-end apps

By Kristin Balleisen

Claiming that it didn't fit with the company's current focus, Adobe Systems Inc. last week divested itself of its pre-press division.

The new company, Luminous Corp., headquartered in Seattle, will continue to develop, market and support ColorCentral, TrapWise, PressWise, PrintCentral, PrePrintPRO and OPEN products. Former Adobe vice president Jim Betlyon will become Luminous president and CEO.

"The whole [pre-press] industry is shifting, and we were beginning to compete with some of our best OEMs," Betlyon said. "[Now] we can deliver a more interesting product line at a better cost point and go through more-standard sales channels."

Betlyon said the company will likely focus on repackaging CPSI (Configurable PostScript Software Interpreter) for OEMs and adding a RIP to its product line.

Luminous will also be the exclusive distributor of the forthcoming Adobe Virtual Network (see 10.09.95, Page 18).

Adobe said it will retain and continue to develop the core trapping, imposition and Open Prepress Interface technologies for its OEM customers, which now include the new spinoff.

Mountain View, Calif.-based Adobe's sole interest in Luminous will be as a minority shareholder and OEM partner.

"The pre-press [applications] simply don't fit in well with Adobe's current business models," said Fred Schwedner, Adobe vice president of the printing and systems division. "We feel that, in terms of production printing, there are other channels that can better support these types of products." □

Diamond polishes PCI card

By David Morgenstern

PCI video card developer Diamond Multimedia Systems Inc. will jump into the fray for low-cost Mac digital video this spring.

At the Macworld Expo, Diamond unveiled Javelin AV/TV, a $169 PCI card that will integrate video capture with a TV tuner. Javelin AV/TV will capture video at 640-by-480-pixel resolution and 30 fields per second. It will include S-video, composite and audio connectors.

The card will not provide display capabilities and instead will rely on third-party display cards or on-board video.

In addition to video capture and the TV tuner, the card provides a connector for an MPEG playback daughtercard. The option will cost about $100. The card does not support video compression.

The Javelin AV/TV debut followed ATI Technologies Inc.'s rollout of its low-cost digital video solution, the XClaim MM PCI card, which will include video out for about $300.

Diamond Multimedia Systems Inc. of San Jose, Calif., can be reached at (408) 325-7000; http://www.diamondmm.com. □

Caere and Xerox update OCR apps

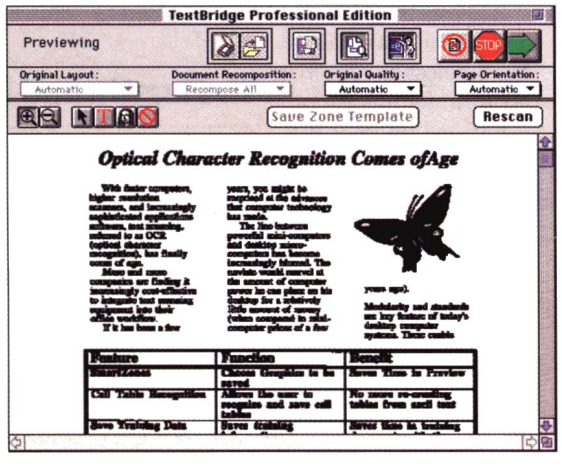
By Matthew Rothenberg

Two heavyweights in the field of optical character recognition last week delivered the latest Mac versions of their OCR packages.

At Macworld Expo in San Francisco, Caere Corp. unveiled Version 6.0 of OmniPage Pro, and Xerox Corp. rolled out TextBridge Professional Edition 3.0. Both packages enhance recognition and offer easier access to OCR from within other applications, the companies said.

OmniPage Pro 6.0, available now for $499, also features output to HTML files. According to Caere, Version 6.0 reduces recognition errors by 26 percent. The company said it has added a new algorithm for verifying characters in context and introduced a new parser for page elements.

In addition, OmniPage Pro 6.0 includes a help system based on Apple Guide, an Apple menu item that initiates scans and a new tool bar that helps automate the OCR process. The company said Version 6.0 is fully Power Mac-native.



Xerox's TextBridge Professional Edition 3.0 has a new recognition engine that incorporates fuzzy-logic technology for enhanced OCR capabilities.

Upgrades from other Caere products are $99 each; users who acquired Caere OCR software via a bundle can upgrade for $149.

TextBridge Pro 3.0 is slated to ship in February for $349 and runs native on Power Macs or 680x0-based models. Version 3.0 includes Instant Access OCR, a feature that lets users convert scanned documents within their word processing application.

Caere Corp. of Los Gatos, Calif., is at (408) 395-7000 or (800) 535-7226; fax (408) 354-2743.

Xerox Corp. of Peabody, Mass., can be reached at (508) 977-2000 or (800) 248-6550, Ext. 3; fax (508) 977-2435. □

Astarte puts squeeze on MPEG video files

By Matthew Rothenberg

A new software package from Astarte GmbH promises to ease financial pressure on digital video producers shopping for a low-cost route to MPEG encoding.

M.Pack, due in February for $459, will run on Power Macs with 16 Mbytes of RAM, Astarte said.

According to the company, M.Pack will convert QuickTime files to MPEG; the software can set parameters for PAL (a European video standard), NTSC and film formats automatically. It will also include a multiplexer capability that will let users synchronize sequences that have been encoded separately.

Astarte said that on a Power Mac 9500, M.Pack will be able to encode one minute of video in 30 minutes or one minute of audio in four minutes; multiplexing both streams will require about one minute of processing. To reduce processing times, M.Pack will let users divide large encoding jobs among multiple Macs.

While slower than hardware solutions, the software's price tag makes it competitive with high-priced MPEG boards. It also offers producers with limited PCI slots an alternative route to video compression, Astarte said.

Astarte GmbH of St. Paul, Minn., can be reached at (612) 483-5338; fax (612) 438-5448; http://www.astarte.de/. □

Terran crunches QuickTime

By Matthew Rothenberg

Terran Interactive Inc. is putting the squeeze on QuickTime video with software that offers a variety of processing options.

Movie Cleaner Pro, available now for $129.95, works with any video compressor-decompressor, Terran said. It runs on any Mac equipped with System 7 and QuickTime 2.0 or better.

According to Terran, the software can compress QuickTime sequences at any ratio and can process a one-minute sequence in about 30 minutes on a Power Mac. It features drag-and-drop batch processing of up to 2,000 files, including adding effects to all sequences in a queue.

Users can suspend compression at any point in the process, review the compressed portion, then resume compression. Movie Cleaner Pro features a before-and-after preview that allows users to ascertain image quality at the level of compression they have selected.

The software also includes Movie Expert, a feature that helps users choose the best setting for each movie. More experienced users can numerically adjust controls for features such as fades, crops, resizing and Gaussian blurs.

Terran Interactive Inc. of Los Gatos, Calif., is at (408) 353-6231 or (800) 577-3443; fax (408) 353-3871; info@terran-int.com; http://www.terran-int.com. □

Movie Cleaner Pro offers before-and-after views of the QuickTime sequence it is compressing.

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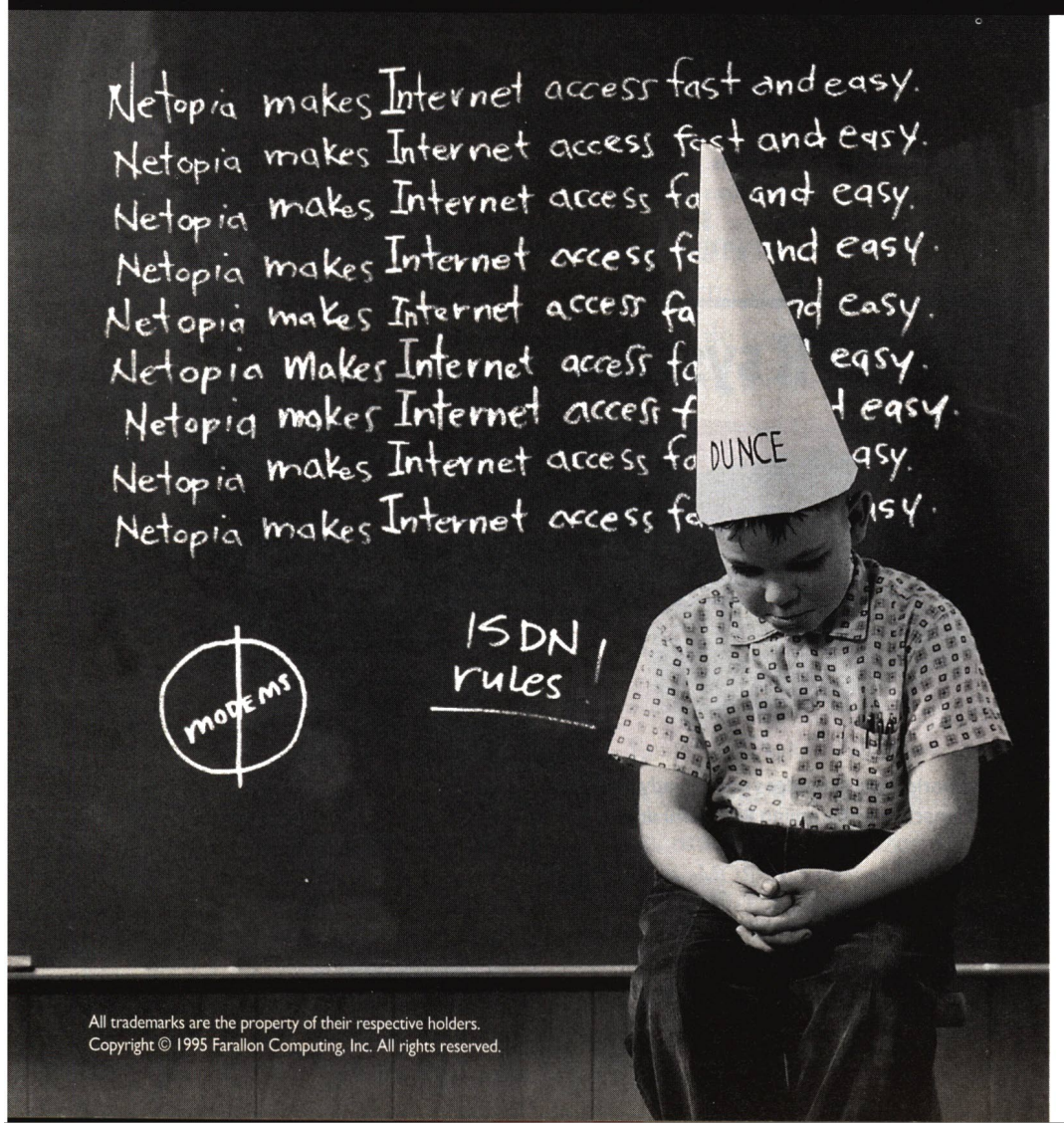
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Quicksoft open for business

By Jon Swartz

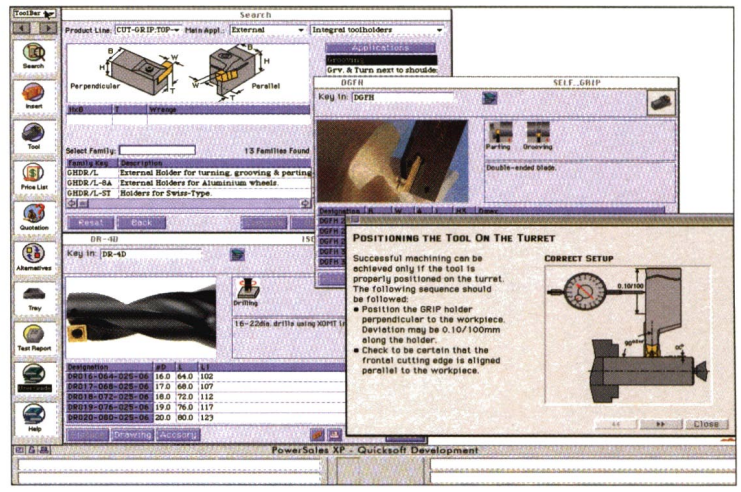
A small Israeli developer has big plans for the U.S. market: Quicksoft Inc. is putting the finishing touches on localized versions of a pair of cross-platform business titles and a database environment.

The 5-year-old company, which last summer opened offices in Cupertino, Calif., is readying English versions of QuickManage, a full-featured accounting and financial management package; Power Sales XP, an enterprise solution; and Mediator, a multimedia database environment.

▶ **QuickManage.** The $995 program is designed for managing small- to medium-sized businesses. The company said it expects to ship the package by mid-1996. QuickManage will provide 10 modules for features including administration, general ledger, sales management, purchasing, customers and suppliers tracking, banking, inventory and stock control, production, and report and cash-flow-statement generation.

In addition to the Mac, the software supports Windows 3.1, Windows 95 and Windows NT platforms; it is compatible with Apple-events scripting as well as Microsoft Corp.'s Dynamic Data Exchange.

▶ **Power Sales XP.** Quicksoft's enterprise system for multimillion-dollar companies starts at $100,000 for a site license and up to $350,000 for a customized solution. It is now shipping in the United States. The object-based management package includes catalogs, sales tools, customer tracking, financial and production tracking, and an executive information system, the company said.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Successful machining can be achieved only if the tool is properly positioned on the turret. The following sequence should be followed:
Position the GRIP holder perpendicular to the workpiece. Deviation may be 0.10/100mm along the holder.
Check to be certain that the frontal cutting edge is aligned parallel to the workpiece.
CORRECT SETUP
PowerSales XP - Quicksoft Development

Quicksoft's Power Sales XP is a pricey enterprise package that includes catalogs, sales tools, business tracking and a powerful executive information system.

▶ **Mediator.** The company's multimedia-savvy, object-oriented database environment is also slated for a mid-1996 release. Pricing has not been set. Mediator is aimed at the electronic distribution of large-sized databases that are tied to multimedia content, such as catalog publishing and marketing and support departments. The authoring software will let users drag and drop data elements to quickly create complex queries, and subsequently present search results in text, graphical and animation formats.

Besides serving up data over a network connection, Mediator will support the speedy creation of subsets for CD-ROMs and HTML documents. The software will come with a small-footprint helper-player application for use with Web browsers, Quicksoft said.

The environment will run on 680x0 and Power Mac machines, as well as Windows 3.1 and Windows 95 platforms.

Quicksoft Inc. of Cupertino, Calif., is at (408) 974-6708; fax (408) 862-7498; s.agassi@applelink.apple.com. □

AfterBurner to pep up older PPC Macs

By James Staten

Owners of older Power Macs can now experience multiprocessing. XLR8 Corp. next week will ship processor direct cards that can deliver multiple-processor performance on machines without Apple's CPU daughtercard architecture.

AfterBurner MVP cards provide a second PowerPC 601 processor for Power Mac 6100, 7100 and 8100 models and all associated Performa models. The $1,199 AfterBurner MVP features a 120-MHz 601 processor, while the $1,299 AfterBurner MVP Pro sports a 140-MHz CPU.

Both cards fit in the processor direct slot inside these machines and provide a PDS pass-through so users can still add other boards, such as the Apple AV card.

Both AfterBurner models function as typical accelerator cards, letting these Power Macs operate at the higher speeds. The company said the cards provide 100 percent compatibility with all Power Macintosh software.

Unlike most accelerator cards, however, AfterBurner cards support DayStar Digital Inc.'s nPower system extension and let the machines access the built-in and AfterBurner CPUs simultaneously when running multiprocessing-capable applications. The cards do not ship with the nPower software.

XLR8 said it is in discussions with DayStar and Apple to bundle the extension with the cards.

XLR8 Corp. of Austin, Texas, can be reached at (512) 346-2119 or (800) 206-7926; fax (512) 346-2800. □

Pinnacle debuts new CD-R system

Revamping its CD-Recordable lineup, Pinnacle Micro Inc. last week unveiled a new recorder and updated authoring software.

Pinnacle's $1,295 RCD 5040 drive replaces the company's RCD 5020. It will record at double speed and play discs at quadruple speed, the company said. Pinnacle said it expects to ship the system in February.

In addition, Pinnacle will release an update to its CD Burner authoring software. Version 2.0 will offer features aimed at both archival and multimedia recording. For example, users will be able to copy a hard drive image automatically and record files on the fly.

The software supports Hierarchical File System and ISO 9660 formats, including mixed-mode and multisession formats. It can also adjust the gap between audio tracks.

The drive will come with a proprietary incremental backup program; two blank discs; and several CD-ROMs containing clip art, digital video and stock images.

Macworld Expo attendees got a heady peek at Pinnacle's forthcoming RCD 5040 drive.

Pinnacle Micro Inc. of Irvine, Calif., can be reached at (714) 789-3000 or (800) 553-7070; fax (714) 789-3150; http://www.pinnaclemicro.com. □

For the record

The 01.08.96 Macworld Expo Show Picks (Page 9), listed an incorrect price for Natural Intelligence Inc.'s Roaster development environment. It costs $399.

NEW
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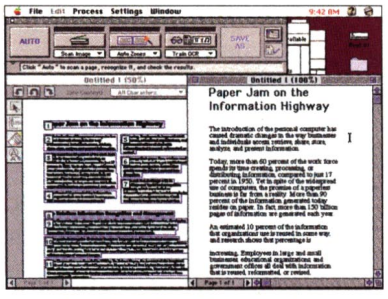

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Two statistics apps get boost

By Jon Swartz

A pair of vendors are shipping updated statistics software that beefs up Mac number crunching and data analysis.

Minitab Inc. in December shipped a Power Mac-native version of its $895 statistics software. Like its immediate predecessor, the 680x0 version released last summer, Version 10 Xtra includes a more polished interface, an enhanced macro language, drawing and presentation-graphics tools, 3-D surface plots, and on-line help.

The program's basic statistics are now plotted graphically, Minitab said. Data can be depicted in the form of overlaid normal curves, box plots and confidence intervals to illustrate descriptive statistics, including mean, median and standard deviation. New regression-analysis routines include an x-y scatter plot and a residual diagnostic plot.

The upgrade from Version 10 Xtra for 680x0 models is $139; it is $199 for previous versions.

Meanwhile, Spreadware recently released Spreadware Statistics Menu 4.0, an update to its Microsoft Excel add-on that adds statistical analysis to spreadsheets.

The upgrade includes new charts and Range Wizard, an intelligent agent that guides users through the statistical process. Users can now script the software via Microsoft Visual Basic for Applications, Spreadware said.

The $229 cross-platform package is available for $139 through February. Upgrades from previous versions cost $39.

Minitab Inc. of State College, Pa., can be reached at (814) 238-3280; fax (814) 238-4383; sales@minitab.com; http://www.minitab.com.

Spreadware of Palm Desert, Calif., can be reached at (619) 772-1758; fax (619) 772-1759; spreadware@aol.com. □

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MicroNet unveils Ultra SCSI cards

By David Morgenstern

MicroNet Technology Inc. last week debuted a panoply of new storage devices at Macworld Expo in San Francisco.

▶ **Ultra SCSI.** In February, MicroNet said, the company will release new single- and double-channel Wide Ultra SCSI PCI cards priced at $485 and $1,110, respectively.

The cards will be based on ATTO Technology Inc.'s designs and incorporate proprietary firmware, MicroNet said. The dual-channel cards will have a maximum data transfer rate of 80 Mbytes per second, the company said.

▶ **DataDock.** MicroNet presented a pair of additions to its DataDock series of modular storage devices.

The DataDock Express is a $189 single-bay enclosure that can hold any 3.5-inch drive module. For mobile users, MicroNet also offers a $19 case that holds the dock and power supply.

MicroNet said it expects a first-quarter release for the DataDock 525, a new dock that can hold 5.25-inch modules as well as the current 3.5-inch modules, which will require an $84 adapter.

A Fast SCSI-2 model will cost $785; a Fast and Wide SCSI-2 dock will be $919. The new, larger form factor will let users add new modules, including an $1,189 double-speed CD-Recordable system; a $2,875 quadruple-speed recorder; a $599, 200-Mbyte SyQuest mechanism; a $295 4x CD-ROM player; and a $2,155, 1.3-Gbyte magneto-optical drive.

▶ **DLT.** MicroNet last week shipped the SB40DLT, a new digital linear tape drive.

The $7,645 drive uses hardware compression to offer a maximum capacity of 40 Gbytes. It has a sustained data transfer rate of 3 Mbytes per second, the company said.

MicroNet Technology Inc. of Irvine, Calif., can be reached at (714) 453-6100; fax (714) 453-6101; http://www.micronet.com. □

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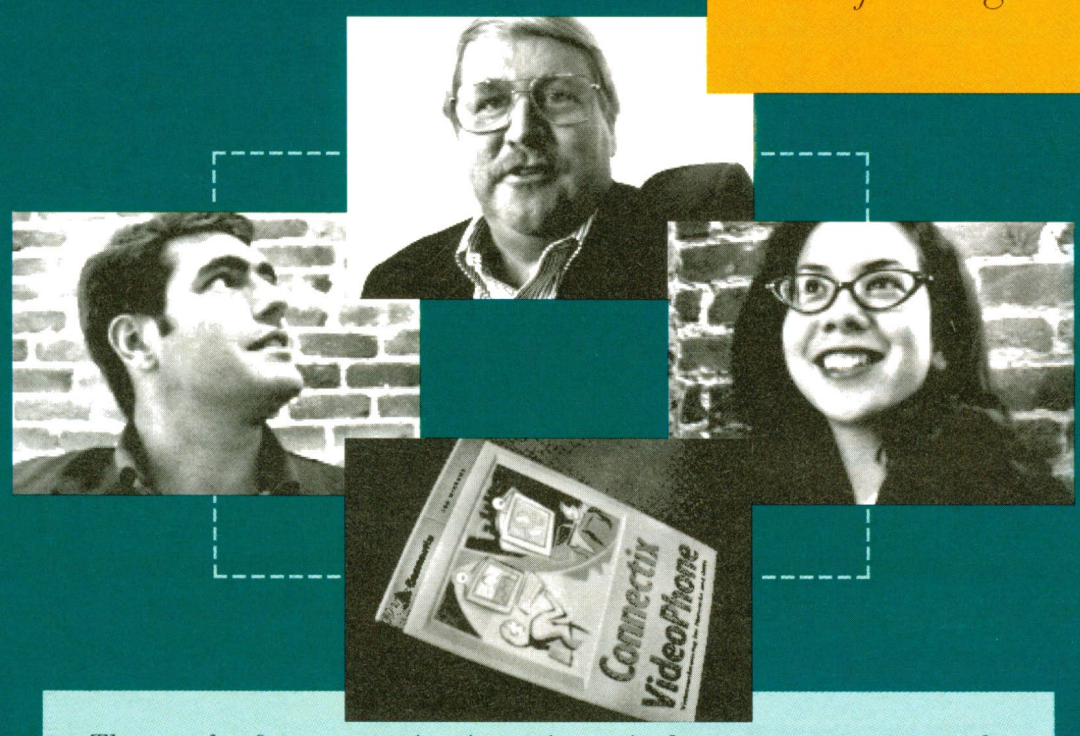

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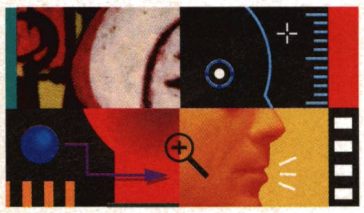


GA

PAINTER TOUCHED UP

There are tools, tiles and tweaks galore in revamped Painter 4. See MacWEEK's review on Page 25.

mTropolis hits town

Multimedia tool juggles objects

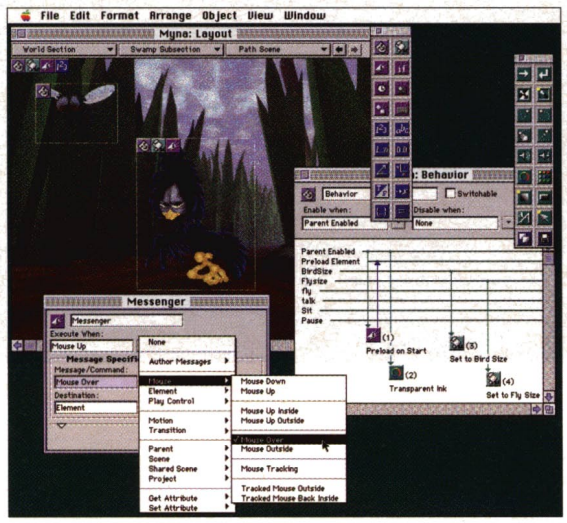
By Kelly Ryer

Multimedia title developers longing for the official release of mFactory Inc.'s mTropolis need wait no longer.

Originally pegged for release this past fall, the $4,995 object-oriented multimedia-authoring tool shipped last week at Macworld Expo in San Francisco.

According to the company, mTropolis features interaction among multiple objects containing sound, text, video or graphics together with programmed behaviors. Several hundred objects at a time can respond to internal messages as well as user input, mFactory said. The software is based on a scalable core technology called mFusion, so programmers can attach their own routines to objects within mTropolis.

Jason Kay, a producer at Activision Inc. of Los Angeles, is using mTropolis to build a yet-to-be-announced multiplayer network game. "mTropolis is especially great for network-game development," Kay said. "The software is sending highly compressed files, new code applets or objects over the Net, just like it sends them within itself."



mTropolis lets multimedia developers control how sprite objects will respond to internal cues from other objects as well as user input.

Kay also said he feels that mTropolis may pose serious competition for Director, Macromedia Inc.'s multimedia authoring tool. "It's like Shockwave for Director, only a hundred times more sophisticated," Kay said, referring to Macromedia's Internet authoring technology.

"I see this as a Director killer," he said. "If I were Macromedia, I'd be nervous."

According to mFactory, titles developed in mTropolis can be moved to other platforms without reprogramming. Players for Windows 3.1 and Windows 95 are included with the package.

mTropolis also features a "fragment loader" that brings pieces of a multimedia title into memory as needed, eliminating the need to load an entire title into RAM.

It ships on a hybrid CD-ROM with a library of more than 30 predefined modifiers, including one that allows consumers to print images from titles and one that lets users add MIDI audio.

mFactory Inc. of Burlingame, Calif., can be reached at (415) 548-0600; fax (415) 548-9249; http://www.mfactory.com. □

DeltaPoint lets users get moving on Web

By Kelly Ryer

A new multimedia authoring package from DeltaPoint Inc. promises to put nonprogrammers behind the wheel of Web-based animations.

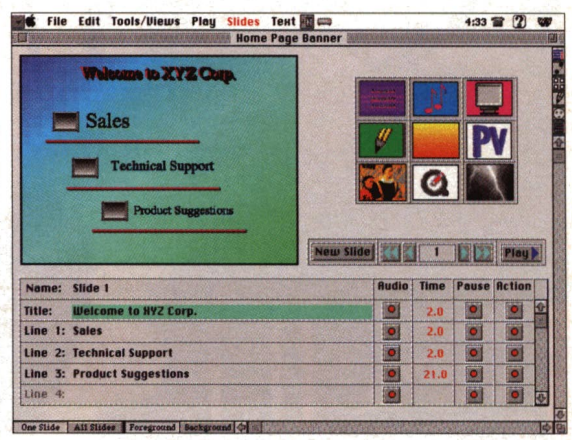
WebVision Animator will combine authoring tools with a plug-in for Netscape Navigator. DeltaPoint said the software will cost $295 when it ships sometime in the first half of 1996.

According to the company, WebVision Animator's use of vector-based graphics instead of bit maps minimizes RAM requirements. Additional bit maps, sounds or movies are heavily compressed via a combination of JPEG and proprietary algorithms. A 1-second animation can occupy as little as 5 Kbytes, DeltaPoint said.

WebVision Animator includes predesigned animated templates, but users can also build their own animations by combining transitions, sounds, colors, time controls, drawings and animations. Users can import QuickTime and PICS animations; PICT, TIFF, GIF and JPEG images; and AIFF (Audio Interchange File Format), .snd and SoundEdit audio files. Sound can be synchronized to animations automatically, DeltaPoint said.

The company said it plans to distribute WebVision Animator's Navigator plug-in component free from its Web site, allowing Web browsers to view downloaded animations. DeltaPoint said it also plans a plug-in for Windows, as well as a standalone player for users who don't own Navigator.

DeltaPoint Inc. of Monterey, Calif., can be reached at (408) 648-4000; fax (408) 648-4025; http://www.deltapoint.com. □

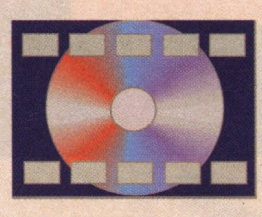


WebVision Animator creates Web-oriented animations like this slide show. It draws on vector-based graphics and compression technology.

FOCUS ON PUBLISHING

Photo CD focuses on high end

By Matthew Rothenberg



Recent advances in Eastman Kodak Co.'s Photo CD technology are helping the company move from film and other consumables to desktop digital imaging.

Kodak in December unveiled new Web-based software, which was created in cooperation with the National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign. The Kodak Digital Science technology lets users zoom in and examine details of high-resolution, 24-bit-color Photo CD images on the Internet.

Rochester, N.Y.-based Kodak said the software, which is currently available to users of Mosaic for Windows, will ship for Mac and Unix users later this year. In addition, the company said it is developing a version of the technology compatible with the Java programming language.

In another step for its strategy, Kodak and Canto Software Inc. of San Francisco announced at last week's Macworld Expo in San Francisco that Kodak will discontinue its Shoebox image-database software and provide an upgrade to Canto's Cumulus 2.5 package, which will be bundled with Digital Science

See Focus On, Page 14

Xanté preps oversize printer

By Kristin Balleisen

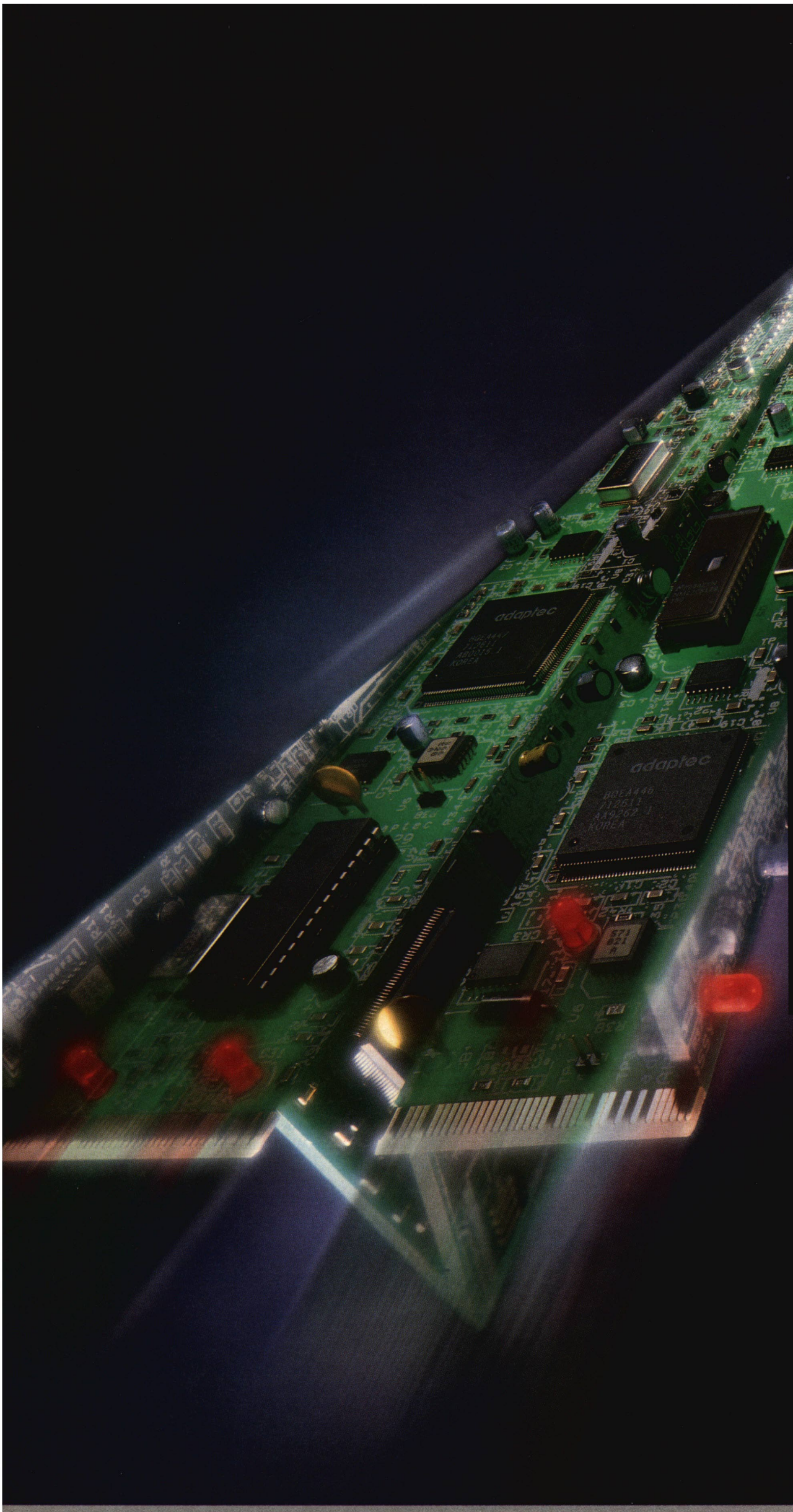
Xanté Corp. last week rolled out an oversize laser printer and a new hardware RIP for inkjet plotters at Macworld Expo in San Francisco last week.

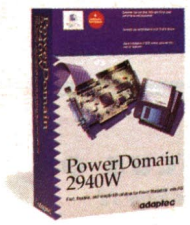
The Accel-a-Writer 8300, slated to ship this month, will be available in 600- and 1,200-dpi versions priced at $3,495 and $5,495, respectively.

Both configurations are based on Canon's new 8-page-per-minute LBP JX laser print engine, which can print full-bleed 11-by-17-inch documents as well as oversize pages measuring up to 12 by 25 inches, Xanté said.

The new printer includes an AMD 29040 RISC processor and PostScript Level 2. According to the company, the Accel-a-Writer 8300 will include 8 Mbytes of RAM at 600 dpi and 20 Mbytes at 1,200 dpi; the printer

See Xanté, Page 14





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FOCUS ON
From Page 12

CD-Recordable drives and jukeboxes.

Kodak's commitment to the distribution of high-resolution digital images has won it followers among developers of stock photography CD-ROMs.

For these users, image quality is the top priority. They cite the format's flexible range of resolutions, compression options and ready access to encryption, as well as its ease of use and relatively low price, as drawing cards.

According to Bill Crane, director of communications and marketing with the Atlanta Chamber of Commerce, his organization turned to Kodak's Photo CD technology when it was seeking a digital source for reporters covering the city's Olympic preparations.

The group's 100-image collection, "Atlanta: A Century of Images," comprises two discs. One includes Kodak's Portfolio browser, which contains thumbnail versions of the images along with suggested captions. The other includes encrypted versions of the images in all five Photo CD resolutions, ranging from 128 by 192 pixels to 2,048 by 3,072 pixels. Accredited journalists can request the key for any images they want to include with stories on Atlanta.

"We were attracted by the choice of resolutions," Crane said. In addition, the price of Photo CD was right, especially compared with traditional slides. "We made 1,000 [discs]," Crane said. "For 100 images, that's a little more than $2.50 [per disc], about what it'd cost me to put one-and-a-half slides into a reporter's hand."

Stephanie O'Rear, manager of new media marketing with Westlight Creative Services, a stock-photography agency based in Los Angeles, agreed digitizing photos with a Photo CD system costs far less than traditional scanning methods and is more efficient.

"We save a lot of money by not doing a drum scan, keeping it in-house and maintaining control," O'Rear said. "It all comes down to time and money.

"We can do a $2 scan instead of a $70 drum scan," O'Rear said. "Photo CD means we can maintain control and do it all on our own Macs."

According to Mac Bright, vice president with Hammerhead Interactive Inc. of Deerfield Beach, Fla., his company captures some images with a flatbed scanner but sends most to be scanned by a Kodak service bureau.

Bright said Hammerhead has been able to standardize its own color-balance requirements with Kodak's Precision software. "We color correct them in CMYK mode, then translate them into RGB," Bright said.

"I would say after doing about 10,000 pictures, 99 percent of them, if corrected in CMYK, look great in RGB." □

Xanté

From Page 12

will be able to accommodate up to 64 Mbytes of RAM.

The 8300 will come with X-ACT, new proprietary calibration technology that will let users calibrate printer engines to within a single dot of accuracy.

Xanté said the printer will ship with serial, parallel and LocalTalk interfaces as well as a SCSI port for a hard disk; an Ethernet card for EtherTalk, TCP/IP and NetWare will sell for $395.

It includes a 100-sheet input tray for pages measuring up to 12 by 25 inches as well as a 250-sheet universal cassette.

The company also took the wraps off its $19,995 Accel-a-Graphix-CT4 hardware RIP. Due in February, the RIP packs PostScript Level 2 and will be able to accommodate up to four wide-format inkjet plotters simultaneously.

The new RIP will ship with a 33-MHz AMD 29030 RISC processor and 32 Mbytes of RAM, which can be upgraded to 128 Mbytes. The CT4 will feature an internal 1-Gbyte hard drive for font storage and job spooling.

Xanté said the RIP will support serial, parallel, LocalTalk and EtherTalk interfaces. The new device will also feature stochastic screening technology.

Xanté Corp. of Mobile, Ala., can be reached at (334) 476-8189 or (800) 926-8839; fax (334) 476-9421. □

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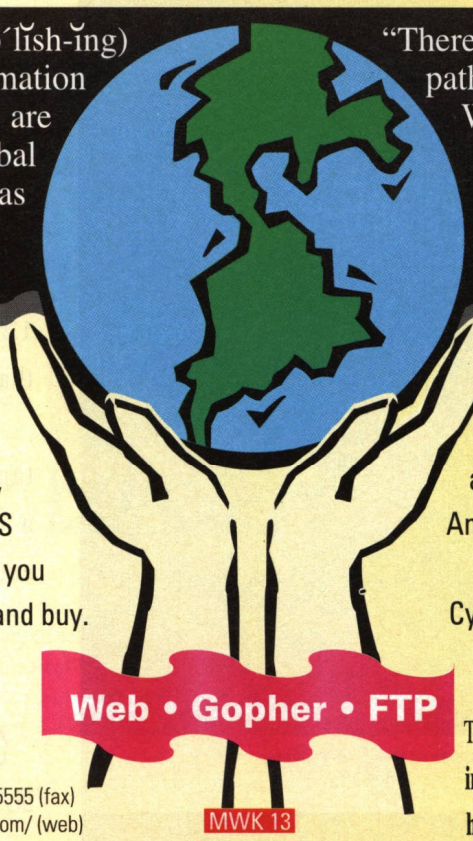
"There seems to be a natural migration path from desktop publishing to the Web." -Richard Rawls, writer, MacWeek (06.12.95)

"Anyone interested in desktop publishing will be interested in Web publishing." -Eric Bickford, Mac Webmasters, MacWeek (06.12.95)



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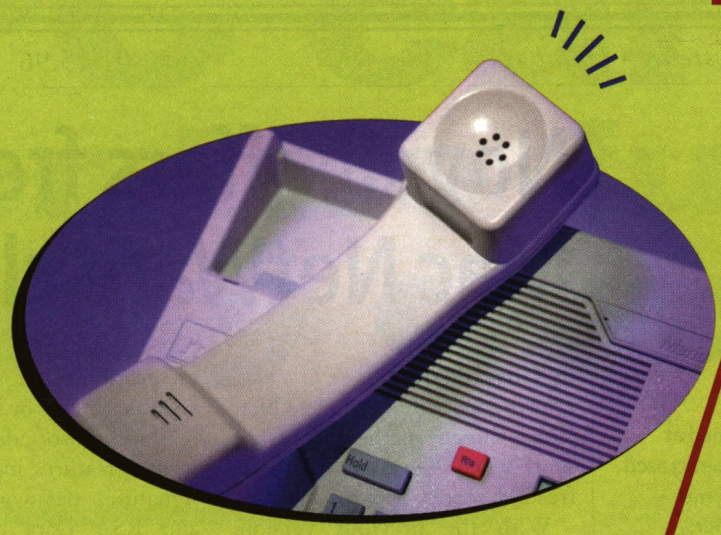

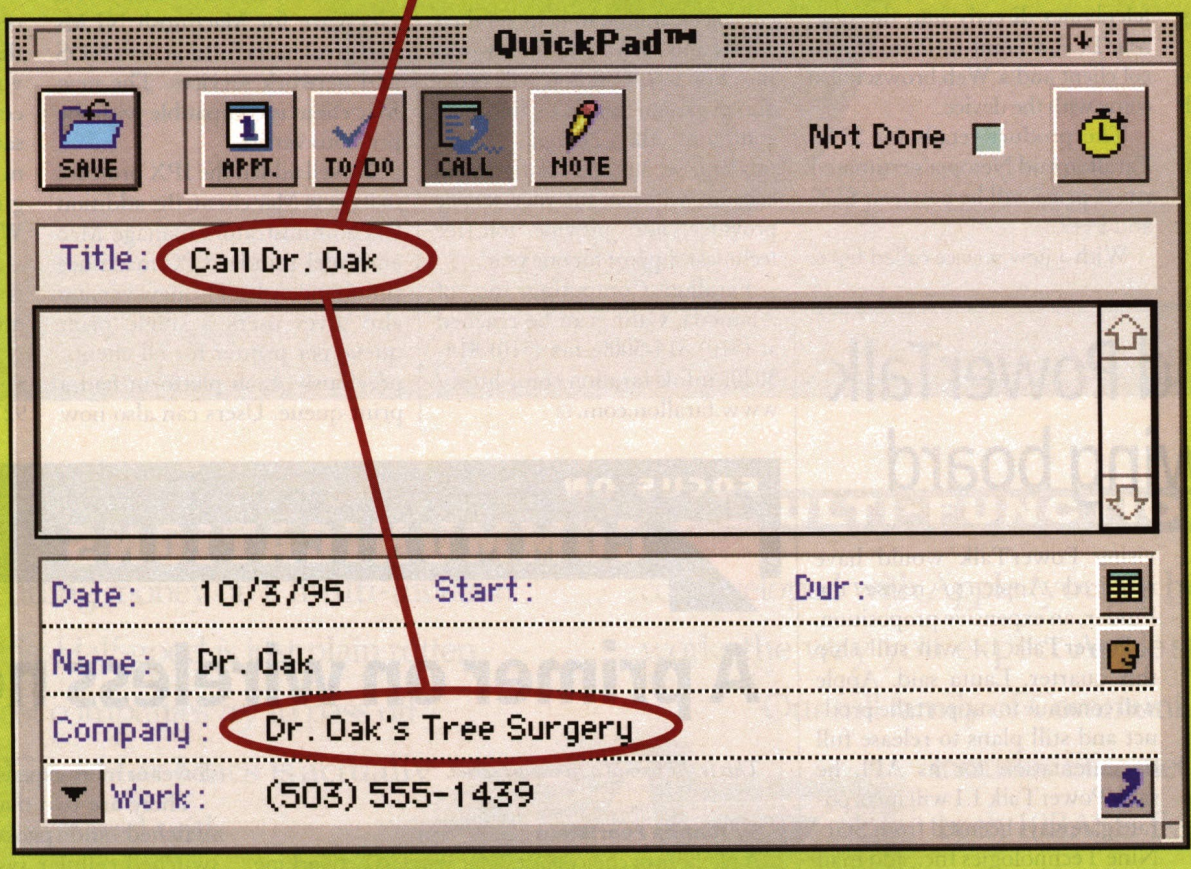

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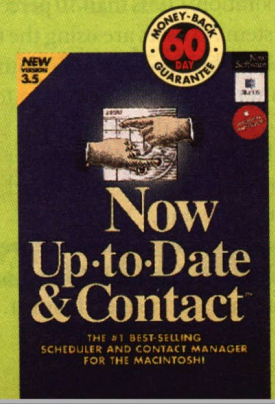


GROUND RULES

Symantec Corp. has named its Java development language Java Cafe; it will be bundled with Symantec C++.

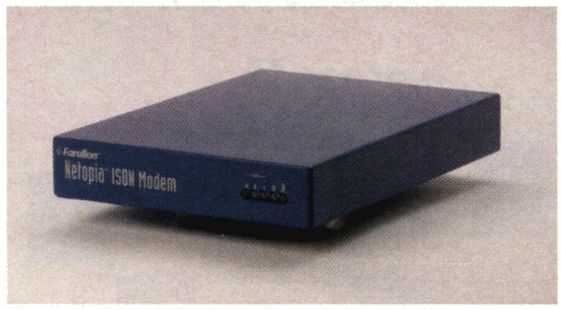
Farallon introduces Netopia ISDN modem

Device supports 128-Kbps speeds

By Joanna Pearlstein

At Macworld Expo last week Farallon Computing Inc. showed off the Netopia ISDN Modem, the company's first personal ISDN product. Expected to ship in February or March, the product is aimed at users seeking high-speed Internet access.

The Netopia ISDN Modem is a dual-channel ISDN, or Integrated Services Digital Network, terminal adapter that can transmit data at speeds up to 128 Kbps. Netopia includes a built-in NT1 and a POTS (plain old telephone service) jack, so that users can plug their telephones directly into the unit. MacTCP, a Point-to-Point Protocol client and a Web browser also come with the device.



Aimed at speed-crazed Internet surfers, Farallon's Netopia ISDN Modem supports speeds up to 128 Kbps.

The product retails for $549; Farallon said Netopia's estimated street price will be between $399 and $449.

With a new service called Up & Running, Guaranteed!, users can contract Farallon to help get their ISDN and Internet services working. For $99, Farallon will order and provision the ISDN line, help configure the Netopia ISDN modem, set up and configure an account with an Internet service provider, and provide toll-free technical support for one year.

Farallon Computing Inc. of Alameda, Calif., can be reached at (510) 814-5000; fax (510) 814-5020; info@farallon.com; http://www.farallon.com. □

Novell offers free Mac NetWare client

By Clifford Colby

Mac users became complete NetWare citizens at the end of last year, when Novell released the free NetWare Client for Mac OS.

With the previous version, Mac users had to use a set of NLMs (NetWare Loadable Modules), couldn't browse the NetWare Directory Services (NDS) tree for network resources and couldn't access servers not running NetWare for Macintosh. The new version does away with NetWare for Macintosh NLMs and gives users full access to NDS and network services. The new Mac client is compatible with the previous version.

Novell added the IPX protocol to its new Mac client; the addition lets administrators manage Mac and Intel-standard PC machines simultaneously. The new version also gives users a single print queue per printer for all clients; previously, each platform had a print queue. Users can also now create aliases of NDS objects, such as printers or servers.

Novell also added network-security features, including packet signature, password encryption and RSA Data Systems Inc.'s public-private key encryption.

Novell said it simplified NetWare management by including with the Mac client the Remote Console application, which lets administrators manage multiple remote servers from a Mac.

"With this client, you can access any volume on a server; with the previous version, only if the volume had Mac name space could you get to it from a Mac," said James Drews, NetWare administrator for the college of Engineering at the University of Wisconsin in Madison.

NetWare Client for Mac OS is available at http://netwire.novell.com or on CD-ROM.

Novell Corp. of Provo, Utah, is at (801) 429-5588 or (800) 638-9273; http://www.novell.com. □

Apple to send PowerTalk back to drawing board

By Robert Hess

In an exclusive interview with MacWEEK, Apple has confirmed that it is moving away from PowerTalk as its core communications solution — until the Copland OS ships.

A major revision of PowerTalk for Copland will be based on OpenDoc and Internet services such as SMTP (Simple Mail Transfer Protocol) instead of the current proprietary technology.

"Adoption of PowerTalk has been very disappointing," said Andy Lauta, product-line manager for communications and collaboration. "Less than 10 percent of System 7.5 users are using the technology because it is too memory-hungry, too slow, confusing to use and does not do enough."

PowerShare, the server for PowerTalk, has not fared any better, he said.

According to Lauta, developers love PowerTalk, but no one is making any money from it. Revising PowerTalk would have required Apple to revise the Finder, an expensive proposition.

PowerTalk 1.1 will still ship this quarter, Lauta said. Apple will continue to support the product and still plans to release full documentation for its API, he said. PowerTalk 1.1 will incorporate gateways licensed from StarNine Technologies Inc., add mail folders, include a new control panel to let users pick their favorite mail reader and separate digital signatures from mail.

Lauta said the Copland version of PowerTalk will be totally new code and will answer all user concerns. It will be smaller and faster; by using OpenDoc for the interface, it will also increase cross-platform support, he said. The Copland version of PowerShare will use Apple's recently acquired Apple Internet Mail Server and will take advantage of features such as AppleShare users and groups. □

FOCUS ON

COMMUNICATIONS

A primer on wireless networks

This is the first of a two-part series.

By Joanna Pearlstein

A plethora of choices faces Mac wireless networking heads, and each option has its drawbacks. Some options lack broad geographical coverage, others limit use to small messages, and almost all are either slower or more expensive than a 28.8-Kbps modem.

There are two main types of systems: circuit-switched and packet-switched. With circuit-switched cellular systems, users need a cellular phone and a modem that supports MNP-10EC, the protocol designed to improve the reliability of cellular data. Cellular modems cost about $350 and can generally transmit data at speeds up to 28.8 Kbps. Users are charged based on connect time.

Packet-switched systems send messages when they are received; the user pays based on the amount of data — the number of packets — transmitted. The major packet-switched networks are from Ardis of Lincolnshire, Ill., a wholly owned subsidiary of Motorola Inc., and RAM Mobile Data of Woodbridge,

See Focus On, Page 18

Wireless networking options

TYPE	MAXIMUM SPEED	TYPE	% OF USERS
Ardis	4.8-19.2 Kbps*	Packet-switched	8
Cellular	28.8 Kbps	Circuit-switched	60
CDPD	19.2 Kbps	Hybrid	0-1
RAM	8 Kbps	Packet-switched	6

**19.2-Kbps speeds available in major metropolitan areas.*
Source: The Yankee Group, 1995

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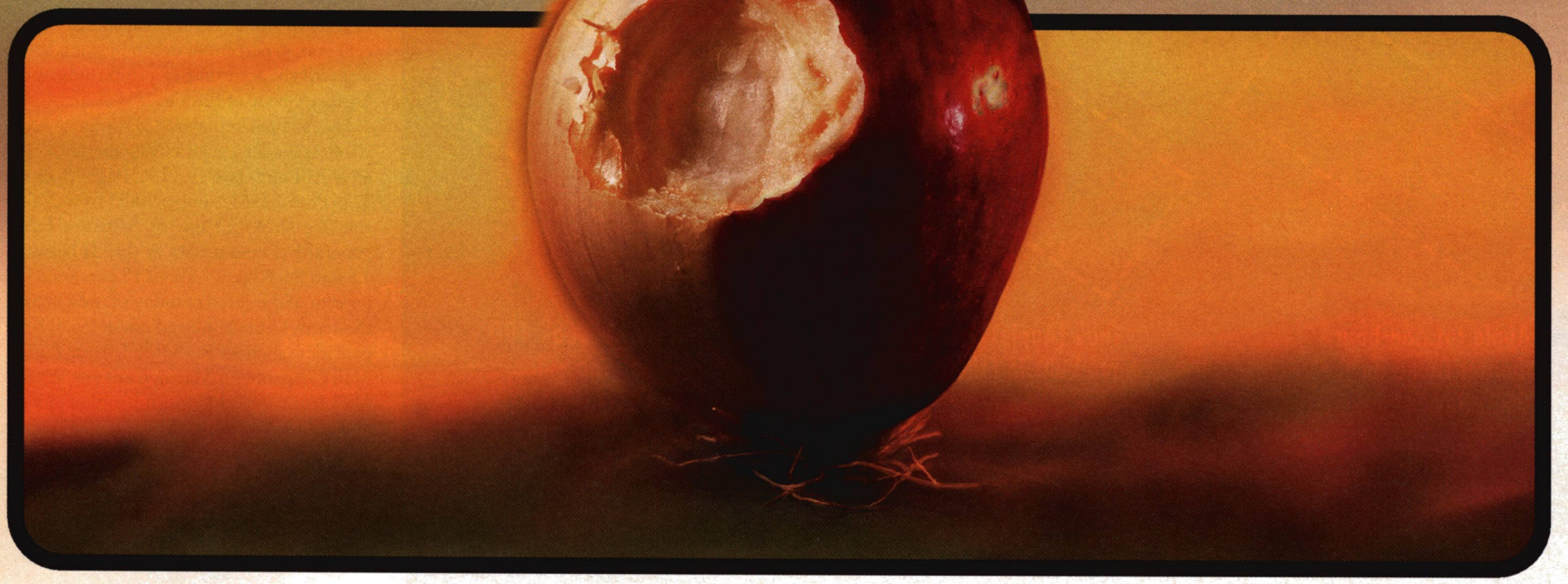

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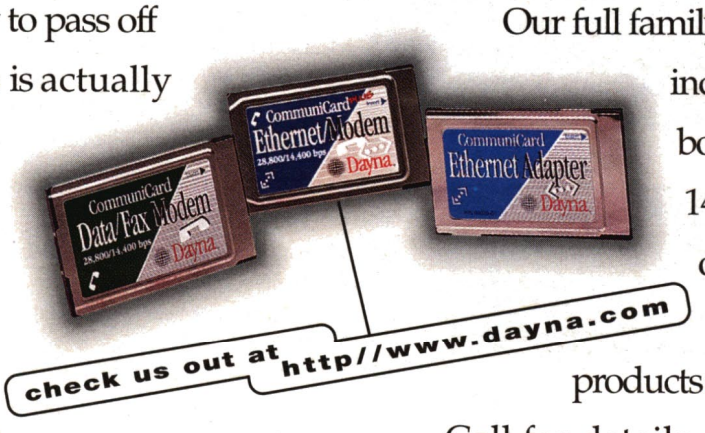

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CommuniGate modules set to ship

By Clifford Colby

Hard on the heels of last summer's release, Stalker Software Inc. said it will ship in February a set of additions to its CommuniGate LAN communications system.

The client-server software, based on Apple events, currently includes e-mail, fax, voice-mail and multiline capabilities, and a UUCP (Unix to Unix Copy Program) gateway for Internet mail.

Among the enhancements Stalker plans to make to CommuniGate is SMTPGate, a module that will support SMTP (Simple Mail Transfer Protocol) and allow users to send and receive e-mail over the Internet. SMTPGate will be able to work with CommuniGate's UUCPGate to give users TCP/IP and UUCP e-mail access.

Also new will be PagerGate, which will give users pager capabilities through CommuniGate. The module will support up to 240-character messages and a variety of formatting commands. PrintGate, another new module, will let users route mail, attachments and faxes to a local printer.

Users can download CommuniGate from various Internet FTP sites and commercial on-line services. Trial versions of CommuniGate modules can be downloaded and used for free, but a notice stating that an unregistered copy is in use will be added to all messages. The CommuniGate server is free for a five-user license, $200 for 25 users and $600 for an unlimited-user license.

Stalker Software Inc. of Mill Valley, Calif., is at (415) 383-7164 or (800) 262-4722; fax (415) 383-7461; sales@stalker.com. □

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Stephen Howard - MacWEEK

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Don Crabb - MacWEEK

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Henry Norr - MacWEEK

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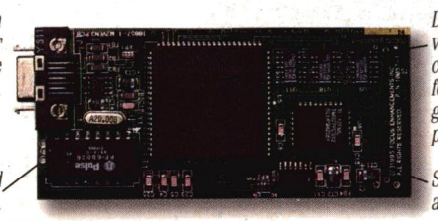
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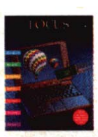

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FOCUS ON
From Page 16

N.J. Ardis and RAM are available in 92 percent and 90 percent of urban business areas, respectively, according to a 1995 study by the Yankee Group of Boston.

Users of packet-switched systems need a wireless modem, such as Megahertz Corp.'s $499 AllPoints (see 10.30.95, Page 18) or the $750 Personal Messenger 100D from Motorola (see 07.24.95, Page 16). Ardis and RAM generally transmit data at speeds between 4.8 and 9.6 Kbps — about 15 percent to 30 percent of the speed of today's fastest analog modems. Users also need a wireless service provider, such as RadioMail from RadioMail Corp. of San Mateo, Calif., or WyndMail from Wynd Communications Corp. of San Luis Obispo, Calif.

Another technology, called Cellular Digital Packet Data (CDPD), promises to deliver data via packet- and circuit-switched networks. Developed by a consortium of telephone carriers, CDPD uses the spaces between voice calls on the cellular network to transmit data. CDPD applications will choose whether to send data over the packet-switched CDPD network or via the cellular network depending on the size and type of data being sent.

Some networks are unreliable but less expensive, while others are costly and not widely available.

Currently available in 50 U.S. metropolitan areas, according to the Yankee Group, CDPD is still in its early stages of deployment. The only CDPD modem available to Mac users is the $1,200 Pocket Plus 210 from Sierra Wireless Inc. of Richmond, British Columbia (see 10.23.95, Page 4); CDPD can transmit data at speeds up to 19.2 Kbps.

Each network has its pros and cons: some are unreliable but less expensive, while others are costly and not widely available. □

Next week: Which wireless service will win the battle for customers?

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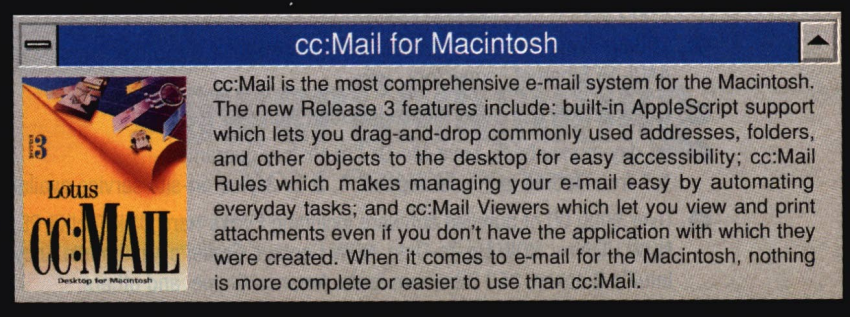
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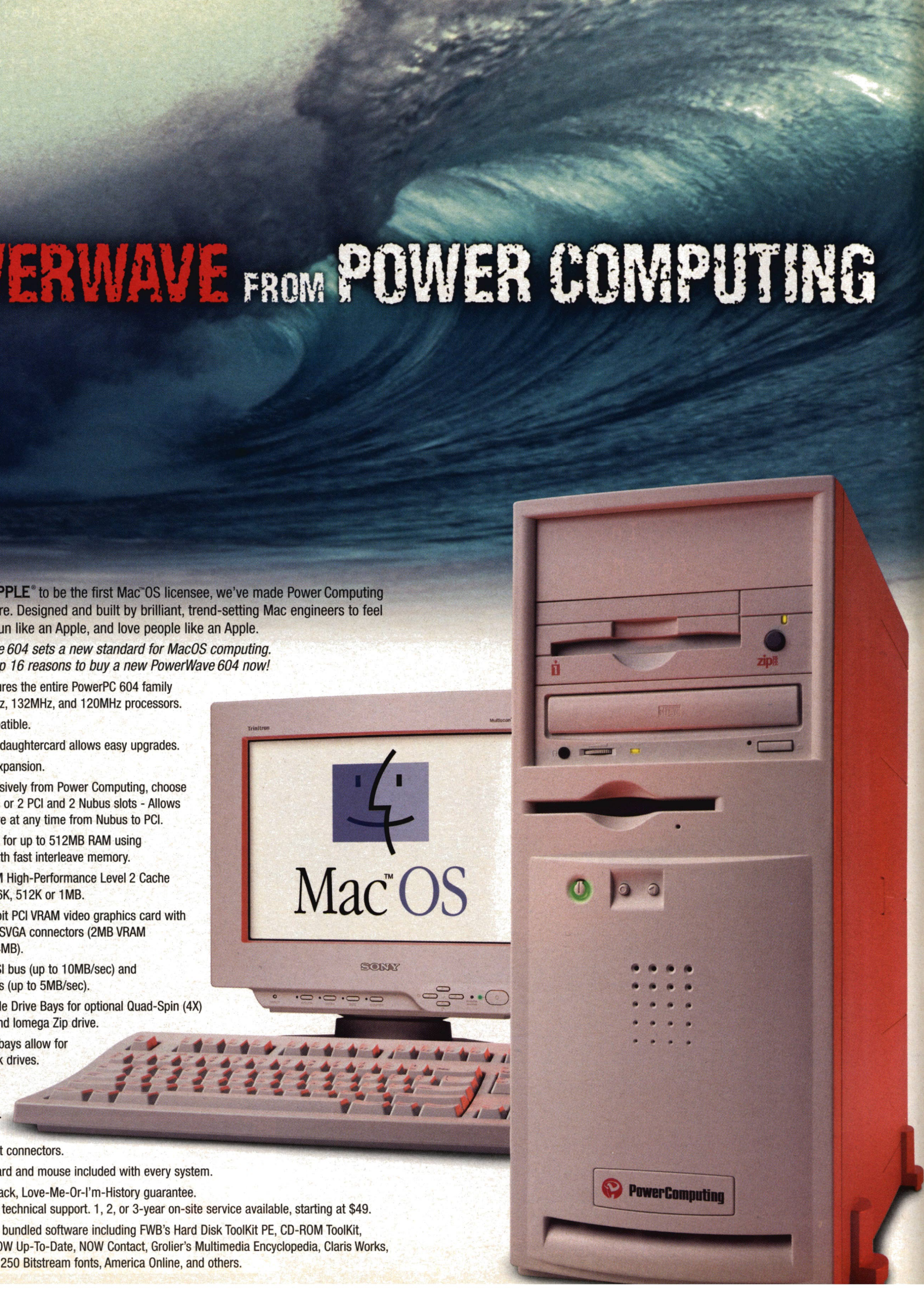

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BPA INTERNATIONAL

Developers star at the expo

Last week's Macworld Expo in San Francisco drove home the point that the Macintosh market remains a vital force in the computer industry. And the legions of third-party developers deserve much of the praise.

Looking around the floor, we saw plenty of new and improved stuff, ranging from toys to serious business wares. One area that seems to be poised for success this year is the digital camera market. Both Eastman Kodak Co.'s DC-50 and Fuji Photo Film U.S.A. Inc.'s Fujix DS-220 raised the bar for existing low-end digital cameras. The high end of the market, dominated by Kodak, Nikon Inc. and Minolta Corp., might not take off as quickly, but the group of products now on the market are mature and stable and benefit from working with the Mac.

The rest of the graphics market isn't standing still. Macromedia Inc. has been able to get its first major revision to xRes out the door, and powerhouse Adobe Systems Inc. is working overtime on Illustrator, PageMill, PhotoDeluxe and more, proving once again that it — not Microsoft Corp. — is *the* premier force in the Mac market. Live Picture Inc. is also ready to go on its own with its image-compositing package, retrieving the marketing rights from MetaTools Inc.

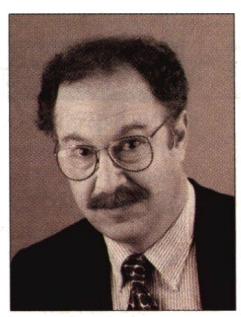
At the show, companies such as ATI Technologies Inc. and Number Nine Visual Technology Corp. led the charge toward PCI with second-generation cards for video capture and graphics acceleration.

And despite reports that the business market has gone soft on Apple, there were plenty of indicators to the contrary. Leading the way were Claris Corp.'s FileMaker Pro 3.0, ProVUE Development Corp.'s Panorama 3.0, Big Island Communications Inc.'s YoYo and Big Software Inc.'s Big Business.

And these are just a few of the vendors who took their new products to the Mac public last week. The fact that they, not Apple, were the stars of the show bodes well for the continuing success of the Mac market. □

THE SECOND DECADE HENRY NORR

Net phone: Philips blazes trail, but Apple's got goods



Evidently I'm not the only one who thinks a "Net phone" — a telephone with built-in screen, keyboard, and e-mail and Web-browser software — is a neat idea: Within hours of the appearance of last week's column on MacWEEK's Web site, I had a half-dozen messages demanding the name of the company I said was building such a device (see 01.08.96, Page 40).

No more teasing: It's Philips Home Services Inc., a Burlington, Mass.-based subsidiary of Philips Electronics NV, and the product is called the P100 Screen Phone. In its current form, it's not quite the device I'm envisioning, but it's within striking distance.

P.O. Box

Although hardly anyone seems aware of it, the P100 has been available since 1993; 20,000 units are already in the field. It lists for $399, but officials said they expect it to drop to about $200 within two years. Features include a 320-by-240-pixel gray-scale display, a keyboard that slides under the phone when not in use and a PC Card slot. (You can find more details and pictures at http://www-eu.philips.com/phs/phs_p100.html.)

So far the P100 has been marketed mainly through vertical channels. Citibank, for example, leases units to electronic-banking customers in New York and Washington, D.C., for $6 per month. But Philips already has plans to add Internet software and retail distribution. Last September it struck a deal with Oracle Corp. to develop e-mail software, which is due later this quarter. Meanwhile, tests of a Web browser for the P100 are currently under way in Europe.

My guess is that the latter combination won't fly, at least in the U.S. market, because the LCD screen can't display graphics and the built-in modem is limited to 2,400 bps. But a new model with a faster modem and improved display is already under development.

Actually, Philips isn't the only company with an eye on this opportunity. A Herndon, Va., business called US Order Inc. said it expects to ship a competing screen phone, the Telesmart 4000, in March. At less than $200 wholesale, it'll be less expensive than the P100, and an e-mail option will be available from the start. The screen will even handle graphics, though at 50 by 165 pixels it won't make much of a Web terminal.

The Apple opportunity

Without getting *too* carried away with this concept, I can imagine demand for Net phones at several price/performance points, from low-end versions with black-and-white screens and few features to high-end models with color displays, PC Card slots, cordless handsets and maybe even a built-in inkjet printer.

Apple already has two products that could serve as foundations for such products: Pippin and Newton. Considering the problems the company already has, my instinct is to think it should stick to its knitting, not embark on new adventures. But it certainly could use a way to capture the Internet wave, and I think a line of Net phones just might do the trick. □

Henry Norr, editor emeritus of MacWEEK, welcomes feedback in the MacWEEK forums on CompuServe or eWorld or at henry_norr@macweek.com.

LETTERS

Bundle power

News reports say computer sales this Christmas are down. I think one of the reasons for this — after looking in on some of the major computer retailers this year — is the selection offered by the big computer manufacturers. It seems everybody has structured consumer systems around bundles. The minimum (unbundled) Power Macintosh configuration is the 7200/75 with 8 Mbytes of RAM and a 500-Mbyte hard drive. If what you really want is a Performa 6200 or 6300 without the monitor, modem or software because you already own them, you're out of luck. The same is true of the consumer offerings from Intel-standard PC suppliers.

Apple should have a low-end Power Mac with a decent hard drive (850 Mbytes to 1 Gbyte), 16 Mbytes of RAM and decent video support for 17-inch monitors without the additional software or 14.4-Kbps modem. This might get those 68040-or-older-system users to upgrade with a minimal investment.

Jeff Winter, program administrator
Lockheed Martin Tactical
Aircraft Systems, Sunnyvale, Calif.

Lies, all lies

I'm still shaking my head in disgust at the decision at some Mac sites to abandon the platform in favor of "standardizing" on Windows boxes. Once again, it seems Microsoft has successfully played on the fears of MIS managers through misinformation to sway them toward the Windows OS and away from the Mac.

I think the "actual use" conundrum here is key. Unfortunately, most decision makers at large corporate sites such as Dow Chemical and Eli Lilly are upper-management-level MIS directors or information technology executives whose knowledge of the Mac platform is based on rumor, misinformation and abject lies provided by Windows-oriented periodicals (Computerworld, Information Week and magazines with "PC" in their titles), more-mainstream publications (Time, Newsweek) and newspapers (The Wall Street Journal, The New York Times). Often financial analysts from prestigious firms will use these forums to spread their ignorance of both the Mac platform and Apple's technologies.

Granted, the responsibilities of an MIS director or chief technology officer are growing more demanding every passing year as hardware and software continue to rapidly evolve; product life cycles are now measured in quarters (as are the life spans of some of the companies who make them); and the specter of "convergence" and an elusive "infobahn" dogs technology executives as persistently as a dead king hounds a melancholy Danish prince.

Direct experience and intimate knowledge of computing technologies must inform these decision makers when they ready their purchasing or standards policies. In fact, if many of these directors fire up their Windows desk toy to check e-mail or make a list of memos, letters or calendar appointments for their assistants to complete, that's the extent of their daily use of desktop computing technology. Yet these people make sweeping technology purchasing decisions that determine the choice and availability of tools for production professionals: those who spend eight to 14 hours a day retouching large color photographs, editing video segments, compositing special effects and title keys for video and film, creating 3-D models and animations for broadcast, and authoring interactive prototypes to deliver media-rich content. The end result: Draw your own conclusions.

Chris Fleming, Tube City Graphics
New York

Pocket Web browser

There's a tremendous buzz in the industry right now about how $500 Internet boxes are going to bring down the Microsoft-Intel cartel. These little boxes will provide seamless links to the Internet and run processor-independent applications written in Java, even though they would not have any built-in applications of their own.

But wait. If I took a Newton and slapped a Web browser on it, I'd have an Internet box! Actually, it would be more than just an Internet box because the Newton has a number of very powerful applications burned right into its ROM. And, oh my, Newton applications are written in processor-independent NewtonScript!

If so, the No. 1 reason for the Newton's (or Magic Cap's) "failure" is its lack of a Web browser. That's specious reasoning.

To be sure, the computer industry needs new ideas that are truly tailored to the consumer marketplace. But it is going to take more than the Web for the Web's sake to topple Mr. Bill. True consumer products tend to be complete or almost-complete solutions, not the empty shells that these Internet boxes seem to be.

Ron Peters, lead engineer
Avid Technology Inc., Tewksbury, Mass.

How to contact MacWEEK

Send letters to MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105; fax (415) 243-3651. We can be contacted on-line: CompuServe, 76077,1351; eworld, MacWEEK; MCI, 323-1203; Internet, letters@macweek.com. Include your name, address and phone number. We reserve the right to edit for clarity and length.

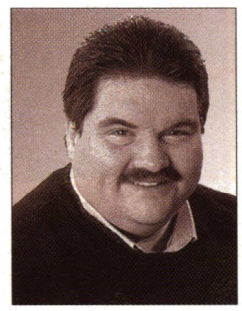
THE MAC MANAGER DON CRABB

An alphabet of solutions for Apple in the new year

Technologies. Products. Solutions. Which one of these is most important to your Mac operation?

If you said technologies, I've got a job for you at Apple. Wanna be the next PowerTalk, QuickDraw GX or OpenDoc product manager? You'd better pick one if you think technologies are your most important concern because I can guarantee that you'll soon be a *former* Mac manager.

The same is true if you had chosen products. You need to know them, buy them, install them, train for them. But the products themselves are just the means to an end, which are, of course, solutions.



Technologies are not products, and products themselves do not make for solutions. Remember this before you start asking for solutions help.

What business and computing problems can you solve? How will you accomplish each solution? That's what you'll be judged on when your 1996 employee review comes down the pike. So if you intend to deliver solutions and keep your job, you need to figure out how to deliver them.

Help wanted

Who points you to the right solutions? In the best possible world, that would be Apple, seeing as how we are Mac managers, after all. If Apple can't give us the strategic and the tactical lowdown, who can?

But who do we call at Apple? There's the rub. In the last Apple reorganization before the current one (mid-1995, for those keeping score), a large new group was created: Apple's Worldwide Marketing and Customer Solutions, headed by Dan Eilers.

Sounds like it could be the organization we need, right? Let's give 'em a call. Sorry, wrong number. WMCS is out of business.

We need a Plan B. Bang the Web for resources. Subscribe to every Apple e-mail list. Go fully digital. Find those at Apple in the solutions business. In my search, I discovered the Apple Business Consortium, which sure sounds like a possibility.

New solutions alphabet

No, as it turns out, ABC is not what we need, all appearances to the contrary. ABC is a good thing for Apple, since it's a not-for-profit organization whose members include Apple, developers of software useful to small businesses, consultants and value-added resellers. ABC helps create awareness and demand for the products and services of its members by conducting seminars at Apple Business Centers across the land. Good deal.

Its members include Big Software Inc., Best!Ware Inc., Casady & Greene Inc., CheckMark Software Inc., Great Plains Communications, Everyware Development Corp. and Softek Design Inc. But it's not a solutions group. ABC's bottom line is about its members' products and convincing us to buy them.

What we need instead are local Apple Solutions Centers that we can call and visit and find on the Web to help us with strategic and tactical planning, problem solving, and solutions implementation. In short, we need all those Apple Regional Sales Support Centers to be put back the way they were before they were gutted years ago. The problem is, how can Apple do that, make money and grow its market share?

Anybody got a Plan C? □

Don Crabb welcomes comments at his Internet address decc@cs.uchicago.edu. You can also check out his home page at http://cs-www.uchicago.edu/~decc/.

"Sylvia, I told you not to call me at the office."

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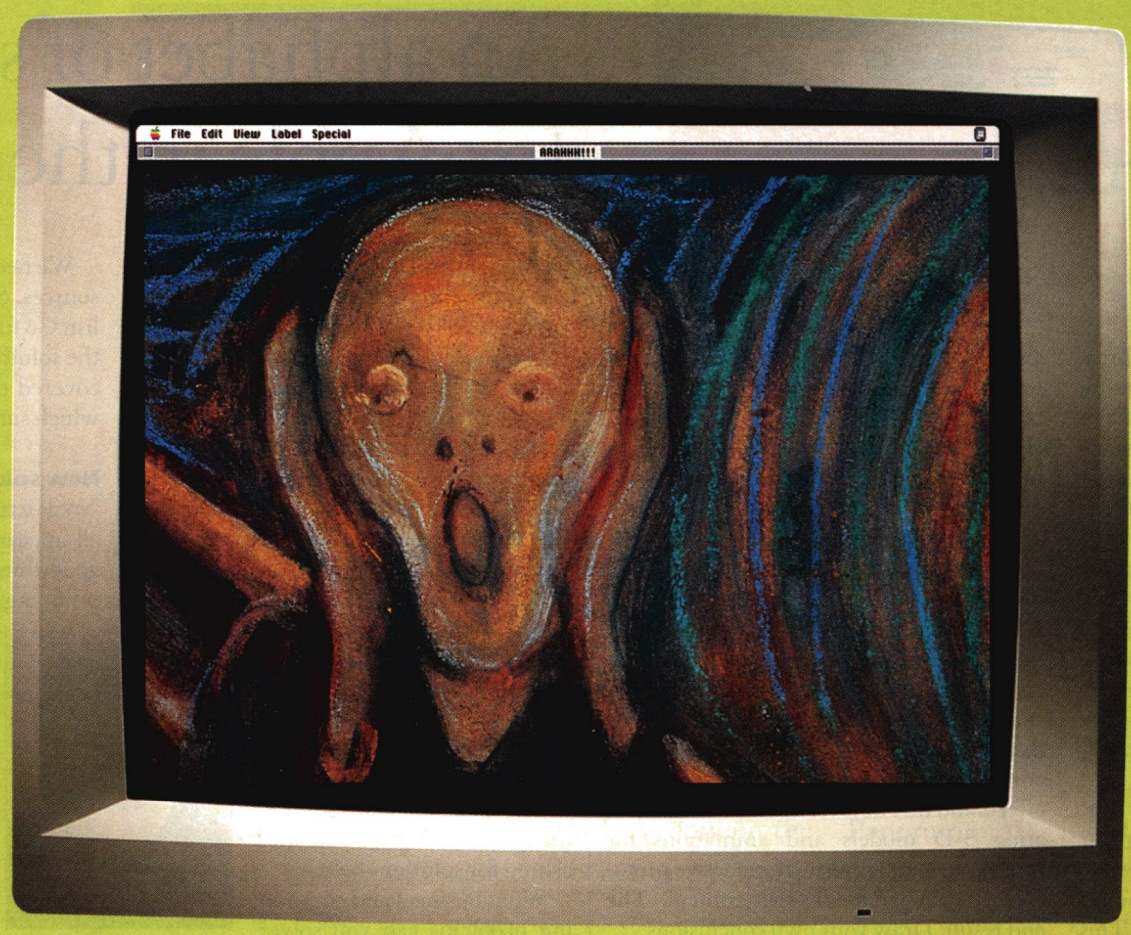

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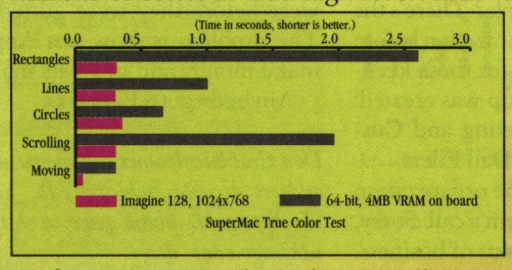

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PERFORMANCE RAISED TO THE POWER OF 9.

GARDEN HOSE

Painter 4 users can get a CD-ROM of more than 150 flora and fauna nozzles from Fractal for $39 through February.

Painter 4.0 shapes up with expanded tool set, features

By Ben Long

Natural-media program from Fractal can now create both vector and bit-mapped art.

With Painter 4.0, Fractal Design Corp. has joined the ranks of developers who are blurring the distinction between painting and drawing programs. The company's latest update to its natural-media application is crammed with valuable new features — including a vector-based drawing layer, a special Mosaic tool and a unique capability to collaborate on a painting over a network — but Fractal still hasn't quite found the right interface for its massive tool collection.

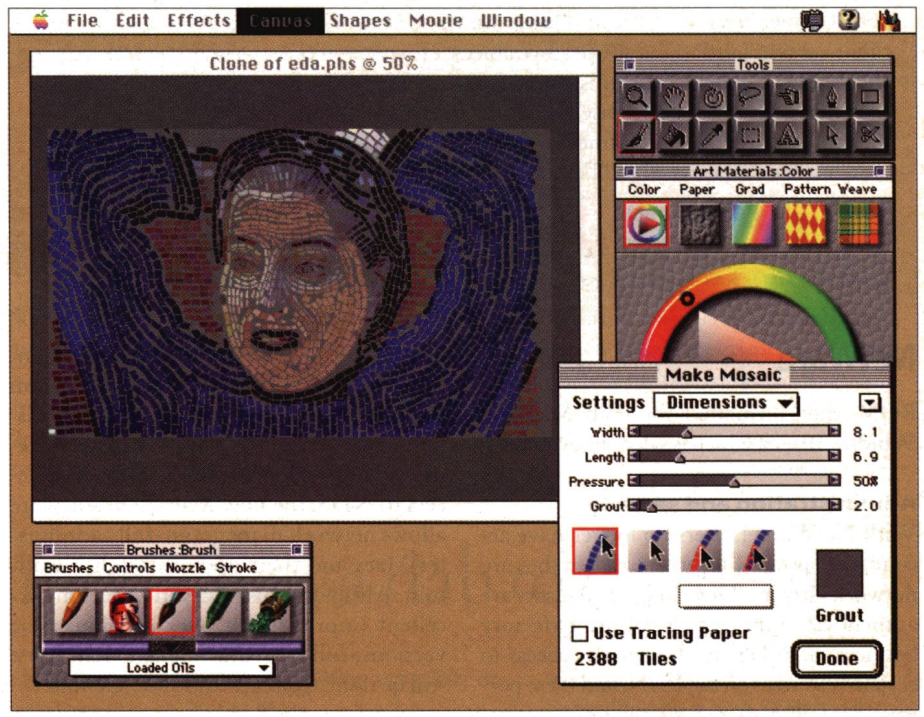
Although Fractal has worked diligently to reduce screen clutter, the $549 Painter is still a cramped application. Not only are there lots of palettes, there are lots of big palettes. If you plan to do more than occasional work in this program, you'll want a large monitor — the standard 640-by-480-pixel screen is almost too small.

Fractal has made many small cosmetic changes to Painter. The Tools menu has become the Shapes menu and contains controls for editing vector-based shapes. The Tools menu's Session controls have been moved into their own section of the Objects palette. Sessions are now called Scripts and can be edited from within Painter.

Tiny menu bars can now be found stretched across the top of most palettes. Each provides controls and commands specific to that palette. For example, the Brushes palette has a menu bar containing Brushes, Controls, Nozzle and Strokes menus. These, in turn, provide brush-related commands such as those for building brushes, loading nozzles and recording strokes. Although these menus provide a clever way of consolidating related information, they add yet another set of elements to an already cluttered interface. New users may spend a lot of time searching for a command or feature among the program's main menu bar, six palettes and each palette's own set of menus.

New layer of paint

Painter 4 introduces a set of powerful PostScript drawing tools, called Shapes, similar to those found in Adobe Illustrator and Macromedia FreeHand. While those products let you import bit-mapped images into their vector-based worlds, Painter lets you actually create and edit both types of images in the same program.



The Mosaic feature in Fractal's Painter 4 lets you paint with tiles that are smart enough to cut and reorient themselves to any necessary shape.

The toolbox's full set of PostScript drawing tools includes a Bezier Pen, Rectangle and Scissors; the latter lets you add and delete control points.

You don't have to activate special modes or create special layers to use these tools: Just select one of the vector-based tools and start drawing. Illustrator and FreeHand users will find the drawing tool set familiar and comprehensive.

Once you create a shape, it appears in the

See Painter, Page 27

score card

Painter 4.0

Fractal Design Corp.
List price: $549*
Overall value ◆◆◆◆

Fractal has added several stunning graphics tools to the latest version of Painter, its natural-media application. The new Shapes feature provides seamless integration of vector and bit-mapped graphics within one application. Although possibly not as useful, the new Mosaic feature lets you convert an existing image or paint a new one using special tools that automatically create tiles of a specified size and color. Other new goodies abound, including special controls for Web authors, but all of these tools get lost when spread across Painter's six palettes and multitude of menu bars and commands. Still, for digital painting, there's nothing better.

Performance ◆◆◆◆
Features ◆◆◆◆◆
Ease of use ◆◆◆
Documentation/support ◆◆◆◆

**Registered users of previous versions of Painter or ColorStudio can upgrade for $129; Version 4 is free to Painter 3 users who made their purchases after Sept. 1, 1995.*

Key ◆◆◆◆◆ *Excellent* ◆◆◆◆ *Very good* ◆◆◆ *Good* ◆◆ *Fair* ◆ *Unsatisfactory*

New NetWare Client 5.1 brings vital NDS to Macs

By Timothy W. Aston

With Version 5.1, Novell gives Mac users better access, security and performance.

Getting advanced NetWare 4.x services through IPX is now a reality. The newly released NetWare Client for Mac OS 5.1 connects Macs to NetWare 4.x through NetWare Directory Services and accesses Novell Inc.'s file and print services for the first time using NetWare's IPX protocol.

With this release, Novell attempts to give Macintosh users enhanced access, security and performance. Our tests indicate that the company succeeds in most of these areas.

This new client software is intended for organizations that have made the move to NetWare 4's enterprise capabilities. NetWare 4's streamlined log-on and password controls are simpler for Mac users who routinely access multiple printers and file servers. Mac client management is now unified within Novell's Nwadmin program, a bonus for network managers who previously had to administer Macs separately.

Instead of AppleTalk, the new client software uses Novell's IPX protocol along with NCP (NetWare Core Protocol) and LIP (Large Internet Packets), all of which promise enhanced performance. Log-on security is enhanced via RSA private-key encryption, and Ethernet, LocalTalk and token-ring cabling are all supported, as is Apple Remote Access.

The Novell NetWare Client for Mac OS is available free on CompuServe (go cis:nwgenfiles) and the Web (http://netwire.novell.com/home/client/mac/patches.htm#MacCl51). It's also available as a $99 CD-

See NetWare, next page

score card

NetWare Client for Mac OS 5.1

Novell Inc.

Overall value ♦♦♦♦ **List price: $99***

Our experience with NetWare Client for Mac OS 5.1 was a quick, easy and enjoyable one — from installation to launch and use. The product scored neutral in our performance tests, with file and program transfer times about the same as the prior client version (also tested for performance). However, it boasts a good feature set, with sound client and administrative tools included. The Directory Browser is an excellent addition for both users and administrators. While the product is easy to install and configure, some minor items were left out of the installation documentation, but the extensive DynaText-style help was outstanding.

Performance ♦♦♦ **Ease of use** ♦♦♦♦
Features ♦♦♦♦ **Documentation/support** ♦♦♦♦

**CD-ROM kit for both Mac and Windows. Also can be downloaded free from CompuServe and the Web.*

NetWare

From previous page

ROM, dual-formatted for both Mac and Windows users, which is what we evaluated.

Administration and security

With NetWare 4, users no longer have accounts on specific file servers; rather, they are network citizens. Once logged on, users are authenticated through NetWare Directory Services, or NDS. Each user has access to certain resources on the LAN, and these permissions follow them everywhere.

NDS lets administrators manage their networks from a single view. With NDS, resource "trees" are defined that categorize all network resources. Network objects in a tree can be departments, servers, volumes, printers and users. All are organized within NDS so that administrators can manage them centrally. Objects are made available to users across the LAN, and their existence is displayed to users through an NDS tree.

Prior NetWare versions required the use of cryptic programs, such as Novell's Atconsole, to manage the Mac environment. These utilities were separate from the familiar Syscon program that administered other clients. This disparity is removed in Version 5.1. By enabling Mac access to NDS, the new Mac client software allows network managers to fully administer Macs and their users through Nwadmin. Although this new software is an excellent improvement over previous Mac versions, full network management must still be done from a Windows machine.

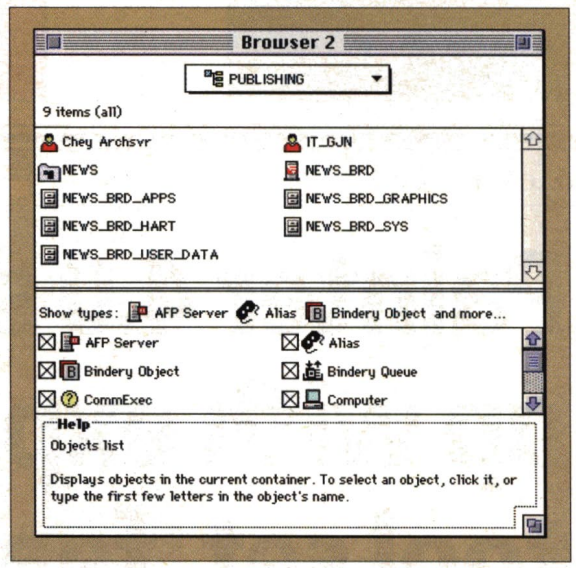
Performance

Version 5.1 of the NetWare Client for Mac OS uses NCP and IPX where prior versions used AppleTalk and server-based protocol gateways. When the Mac speaks NCP directly, the protocol-translation overhead is eliminated for a more efficient conversation between client and server.

However, based on our tests, we found no significant performance benefits with the new client software between the file-transfer performance of NetWare Client for Mac OS 5.1 running IPX and an identically configured Mac running AppleShare client software over AppleTalk. Novell said the nature of LIP means performance will be improved mainly on WANs. One important note: This software is not Power Mac-native, nor is it Open Transport-savvy.

Usage and documentation

Version 5.1 deviates from previous Mac releases because it no longer uses the Chooser to access file and print services. Instead, Directory Browser is employed (see story below). While this departure may seem abnormal, Directory Browser is a cleanly designed tool that affords a more complete view of the entire LAN.



Novell's Directory Browser shows the contents of NDS trees. The Show types section in the middle dictates what sorts of network objects appear in the top half.

The Browser has four sections: path pop-up menu, which lets you view parts of the NDS tree; a list of available NDS objects on the network; a choice of resource types to display; and a help section. Servers, volumes, printers and users are among the many resources defined in the NDS tree. Users can click on icons to see what objects of each type have been defined on the NetWare 4 network. You can make an NDS object more accessible by dragging it to the desktop. Access is quick and easy and follows the Chooser's basic model for clicking and viewing network objects.

For instance, selecting a volume type in the Show Types section of the Directory Browser window revealed the available volumes on a specific server. Doing the same for printers revealed available printers. It is important to note that all available printers and volumes are displayed here, including those not accessible to Mac users such as non-PostScript printers and NetWare volumes without the Mac name space installed. This is different from the views afforded in prior Mac client software releases.

The new NetWare Client also allows for the simultaneous use of AppleTalk and the older NetWare for Macintosh client software. This enables Mac clients to use the Chooser to access NetWare 3 resources, which exist outside of NetWare 4's NDS.

Novell's full set of on-line documentation contains the familiar electronic book and chapter metaphors of DynaText (a program similar to Adobe Acrobat). The text is logically divided, well laid out and very useful. There is also an impressive array of administrative help features that cover everything from advanced client management to configuring Novell print services.

Conclusions

Our entire experience with NetWare Client for Mac OS 5.1 — from installation to launch and use — was a quick, easy and enjoyable one. The big question is whether the product is significantly better than its predecessor and warrants a LAN-wide upgrade. Our answer is yes.

You should upgrade if you want a more stable client (previous Mac clients were known to be buggy in the NetWare 4 environment); Mac-based management programs (after all, this product has as many administrative advantages as user benefits); NDS views of all objects in the enterprise; the capability to migrate users off AppleTalk and onto IPX; and Mac access to more NetWare 4 resources, such as non-PostScript printers and non-AppleTalk servers.

The Directory Browser was our favorite part of the package. It gives Mac browsing of NDS a feel similar to the Chooser but in a much more powerful way. We'd like to see even more functionality given to the Mac user and LAN manager, such as giving administrative access to object- and rights-creation, which is still restricted to Windows. In the end, we think the new NetWare Client for Mac OS is as essential in the NetWare 4 environment as your use of NDS itself.

Novell Inc. of Provo, Utah, can be reached at (801) 429-5588 or (800) 638-9273; http://netwire.novell.com. □

NetWare client installation: Step by step

Hardware and software requirements for each client using the new $99 NetWare Client software from Novell Inc. are a 68030 or better processor, 5 Mbytes of available memory, and System 7.1 or later. The software can be installed from the server, CD-ROM drive or Macintosh workstation over the LAN.

An installer script places several programs onto your Mac: two control panels (NetWare Client, which lets the user change NDS trees and contexts, and MacIPX); two extensions (NetWare Aliases and a MacIPX extension); and four client utilities (NetWare Volume Mounter, Remote Console, Directory Browser and NetWare Print Chooser). The installer creates a folder called NetWare Client Utilities where users can launch the Directory Browser and other utilities. Also included on the CD-ROM is on-line help and electronic documentation.

We ran the installer without problems, and when it finished we were prompted to restart our Mac. It returned an error on start-up indicating that MacIPX had failed to load. This was because there were multiple versions of MacIPX on our computer, which can easily happen, since several third-party programs ship with Novell's protocol stack. There was no warning in the documentation of this possible conflict, an omission that should be corrected. Once the dated MacIPX was removed, the Mac started fine.

The client makes some changes in the Finder. The upper right-hand corner of the menu bar, left of the Help menu, gains a leafless tree icon, a rather literal indication that the client is not yet connected to the NDS tree. Clicking on the tree reveals a menu with commands for logging on and out, changing the password, and managing connections. Logging on gave us access to NDS and authentication on the NetWare 4 server. This step is necessary to complete the installation, which includes several server components.

Installing the server software involves mounting the target NetWare volume on the Mac desktop and copying to it the Server folder from the NetWare Client disc. You complete the installation either at the server console or using one of the new utilities, Remote Console, from the Mac.

Remote Console is the Mac version of the DOS-based Rconsole utility. Using this program requires that two NLMs (NetWare Loadable Modules) be loaded on the server: RSPX and Remote. Logging in to the server as an administrator, running the Install NLM and adding the Mac name space (this has to be done only once) was a snap.

Both the Macfile and Nwcmacc NLMs enabled customized loading of the Mac name space to any volume we wanted. Once this was accomplished, we could use the NetWare service in full.

— By Timothy W. Aston

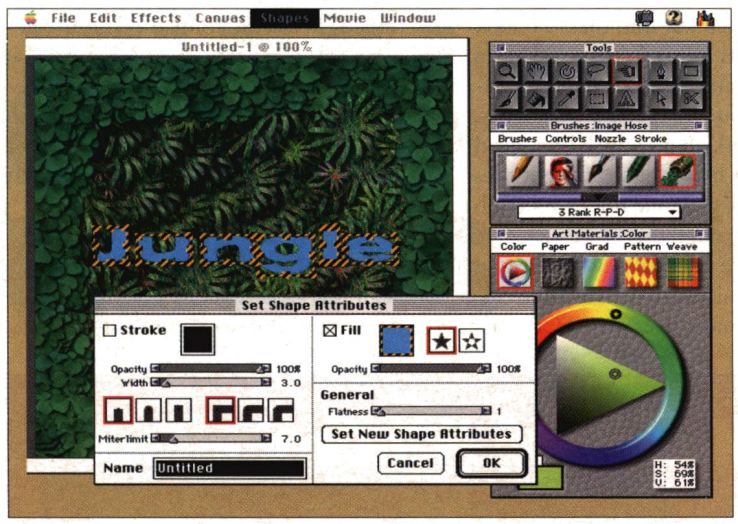
Painter

From Page 25

redesigned Floater List within the Objects palette. Each vector object is treated as a separate Floater; you can move, edit or relayer it at any time. Vector floaters can even be relayered and mixed with bit-mapped floaters, allowing you to place vector artwork in front of or behind bit-mapped artwork.

In addition to simple front-to-back layering, Painter also lets you specify a transfer mode for any vector or bit-mapped layer. For example, you can have a vector layer reverse out underlying layers, whether they're bit-mapped or vector-based. You can also adjust the opacity of a vector layer's stroke or fill. At any time you can rasterize a vector-based object into a bit map by choosing the Convert to Floater command from the Shapes menu or by simply painting onto the shape with one of Painter's regular painting tools.

The Shapes interface needs to be tightened up a bit. For example, to set stroke and fill color you must choose the Set Attributes command to open the Set Shape Attributes dialog. You can then choose colors and opacity levels for the selected shape. Transfer modes, however, are set from the separate Control palette. We'd like to see these features consolidated into one element, such as the Objects palette.



Like an illustration program, vector objects in Painter 4 can have separate stroke and fill colors. The shapes interface, however, needs to be tightened up a bit.

Another clunky convention is the inability to duplicate a vector object by Option-dragging it with the Arrow tool. Instead, you must use the Duplicate command or Option-drag using the separate Floater tool.

Mosaics

You can always count on Fractal to include at least one really cool, flashy feature in each Painter upgrade. Version 4 introduces the Mosaic feature, which lets you create complicated tiled mosaics by painting or cloning with individual, fully editable tiles.

You can start either from a blank canvas or from a clone of an existing image. Creating a mosaic from a clone causes the program to automatically set the color of a tile based on the underlying clone image.

Painter provides a full set of controls for specifying tile size and color variation, as well as the color of the grout between the tiles. In addition, special random settings ensure that each tile is not perfectly uniform.

After selecting the Make Mosaic command, your canvas will be filled with grout. Making strokes with the brush

See Painter, next page

Fractal Dabbler 2.0: Users need more than a dab to do them

Overall value ♦♦♦

For those who have always had an inkling to do some inking but feel their art skills are so poor they can't draw a conclusion, there's Dabbler 2.0. This application from Fractal Design Corp. promises to introduce would-be artists to natural-media graphics by combining tools and tutorials. The $69 Dabbler 2, which ships on a cross-platform CD-ROM, mixes elements from children's educational titles and the company's high-end Painter (see review, Page 25).

While Dabbler can be used to create the same kinds of natural-media works that have become the hallmark of Painter, it immediately reveals itself as a novice-friendly consumer application. While using the program you'll rarely touch the menus. Instead of using a multitude of palettes, as many Mac graphics programs do, Dabbler's implements are neatly arranged in four drawers: Tools, Colors, Textured Papers (a popular Painter feature) and Extras. You open the drawers by clicking their handles or pressing a number. The drawers make realistic opening and closing sounds — an effect that's used a lot in Dabbler. Fortunately, you can disable it.

Dabbler's full palette of tools includes pencils, markers, pens, oil brushes, water droppers and erasers. You have a choice of several brush sizes but not shapes. One of the most clever carry-overs from Version 1.0 is a Rotate Page tool that lets you easily and naturally work on different areas of a drawing. On the other hand, we'd still like to see multilevel Undo and Redo, especially since this is a program aimed at beginners.

In addition to the tools, Dabbler ships with nine effects filters, including Sharpen, Soften and Texturize. The application can also use many Adobe Photoshop filters.

The actual dabbling takes place in the Sketchpad, which allows you to store several drawings on different pages. The Sketchpad has a simplified interface for managing drawings that younger artists can use in place of the Open and Save dialogs.

New to Dabbler 2 is Flipbook, which lets you sequence a series of drawings to create animations. These can be played back within Dabbler or exported to QuickTime format. Simple commands for adding, deleting and removing frames make this a nice introduction to low-end animation, but we think the addition of basic path-based animation and a tweening capability could increase its usefulness.

Foster Grants

Billed as "The Art Tutor Inside Your Computer," Dabbler 2 includes multimedia tutorials based on books in the Walter Foster's learn-to-draw series. Unfortunately, Dabbler includes only two such tutorials — cartoon drawing and cartoon animation — that hardly touch on the great variety of tools available in the program.

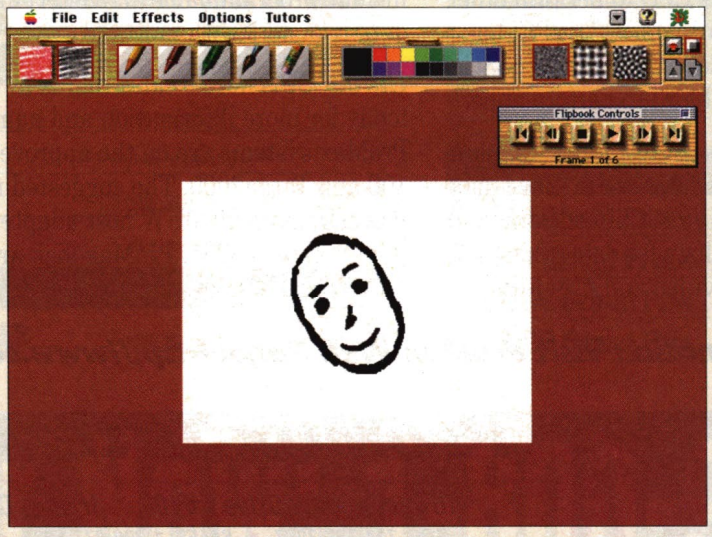
While the tutorial clips are useful and often entertaining, they are all short QuickTime movies that must be played at a fixed speed. Those looking to examine the detailed steps in creating a drawing or animation within a movie must pause and rewind manually. This quickly becomes tedious, especially if you're switching back to Dabbler to practice, since the on-line help resides in a separate application. We'd prefer to have a playback speed command as well as more step-by-step instructions. As an additional teaching aid, Dabbler also offers a tracing-paper feature that lets you create new works based on photography or clip art.

The final tutorial aids are Sessions, macros that capture how a drawing was created. Sessions can be annotated to provide instructions for apprentice artists. We wish this feature had a slow-motion capability, especially on Power Macs.

Performance

Dabbler 2 requires at least a 68030 Mac. On 680x0-based Macs, some effects require an FPU (floating-point unit); Dabbler 2 is a native Power Mac application. To use the program effectively, we recommend a 68040 Mac or better, a 16-bit-capable video display, and an art tablet.

Most work in Painter moves pretty quickly because you're always working in low resolutions and usually on relatively small images. For filter work, performance was consistent with other bit-map-based applications. However, '030-based machines may have trouble keeping up with tablet movements. Dabbler unexpectedly quit once while we were loading a new Sketchpad.



New to Fractal's Dabbler 2 is the Flipbook, which allows you to create animations from your drawings and save them as QuickTime movies.

Documentation and support

Dabbler comes with a QuickStart guide that outlines new features and shows thumbnails of clip art. While the lack of a search feature is a minor inconvenience in the tutorials, it's frustrating in the on-line manual. The two on-line cartoon tutorials, which introduce tools and often interact with the Sketchpad, would be greatly enriched by using Apple Guide.

We had an excellent experience with Fractal's thorough phone support, which took the time to help us with a problem not directly related to Dabbler.

Conclusions

Dabbler 2 may be the MacPaint of the '90s or graduate school for the KidPix crowd. Its fun interface provides an assortment of tools for users to express themselves. As an art tutor, though, it falls flat, providing little more than a hint of what you can do with the tools in the application. Dabbler can teach doodlers to polish their drawings and introduce them to low-end animation, but creating anything eye-catching will require patience, talent and mastery of Dabbler's tools.

Upgrades are $29 for registered owners of Dabbler 1.0 and 1.1, free if purchased after Aug. 1.

Fractal Design Corp. of Aptos, Calif., can be reached at (408) 688-5300 or (800) 297-2665; fax (408) 688-8836; http://www.fractal.com/. — By Ross Scott Rubin

Painter

From previous page

places tiles of the specified size and appropriate orientation. As you move the brush, new tiles are automatically rotated to follow the direction of the stroke. Laying in more strokes creates tiles that are automatically cut to fit any intersections and gaps.

Creating a good mosaic can be a lot of work and requires a good deal of thought and planning. A mosaic is more than an image that has been cut into tiles. To look like a traditional mosaic, tiles need to change direction and rotation to follow different lines in your image. Consequently, you'll need to think about which lines need to go in first and how thick different tiles should be. Painter's manual does a good job of walking you through this process.

One of the more unusual new features in Painter 4 is Net Painter, which lets you collaborate on an image over any TCP connection, even over a Point-to-Point Protocol connection as slow as 14.4 Kbps. You use the new Network section of the Objects floater to establish a connection with any number of other users. Each user needs to know the others' IP addresses, but Painter easily provides this information.

Net results

You can use all of Painter's features while painting over the network, but only one person can paint at a time. A clever traffic light mechanism in the Network window shows who's painting and who's waiting in line. The window also includes a text-based chat area, but, unfortunately, it can't be resized.

Every action the current user takes, including brush strokes and color changes, is displayed in near real time on each user's machine. More-complex operations such as the Mosaic feature take a little more time, as the results have to be sent to each user.

We imagine Net Painter will be of practical use to some artists who want to get input from others while they work, but for most users this will be more of a fun feature.

> The results of the Mosaic feature will have people wondering where you keep all those tiles.

For Web designers, Painter now lets you attach a URL (uniform resource locator) to any floater to create image maps for Web pages. Also, a full set of rulers, guides and snaps is provided, as well as Alignment controls for automatically aligning any floater.

Documentation and support

Painter's documentation has been completely rewritten. In addition to the 400-page user's guide, a separate tutorial walks you through the program's major features. Understanding that not all Painter users have a background in traditional media, the authors provide good examples of how the tools work, as well as offer some practical applications. Painter 4 is about twice the size of its predecessor; a full installation from the included CD-ROM takes up a chunky 27 Mbytes of disk space. The program requires a 68040 or better processor and is a native Power Mac application.

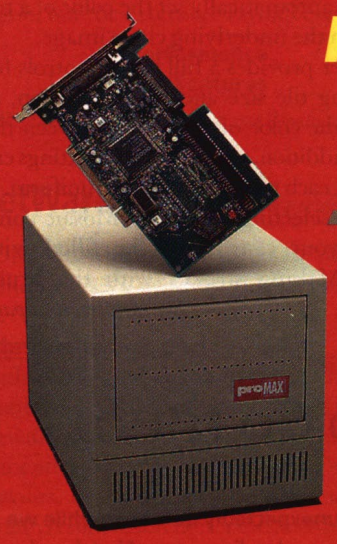
Conclusions

It's always been a little difficult to believe that Painter's results are computer-generated, and Version 4's additions are no less amazing. We initially thought the Mosaic feature would be gimmicky, but it's actually very well thought out. The results will make people wonder where you keep all those tiles. Equally impressive is the program's excellent integration of bit-mapped and vector-based tools. No other program has yet achieved such a smooth synthesis.

Yet for all its power, Painter still bends a little under the weight of its interface. Although there's nothing overtly wrong with its design, when you're using the program you may find many things that aren't quite intuitive. This won't be a problem for daily users, but if you're a once-a-week Painter, the interface may frustrate you.

But here, we'll take the good with the bad, for you won't find a more powerful or effective painting program than Painter.

Fractal Design Corp. of Aptos, Calif., is at (408) 688-5300 or (800) 297-2665; fax (408) 688-8836; http://www.fractal.com/. □



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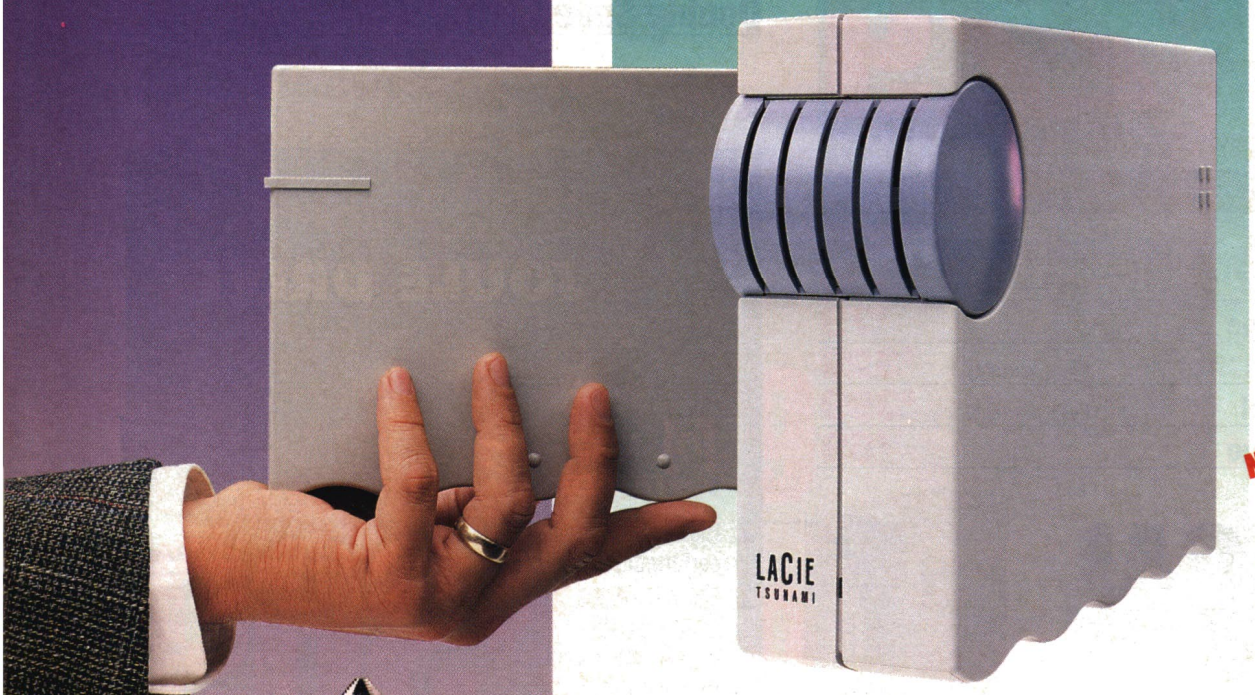

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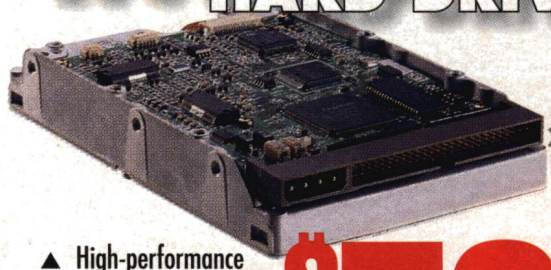

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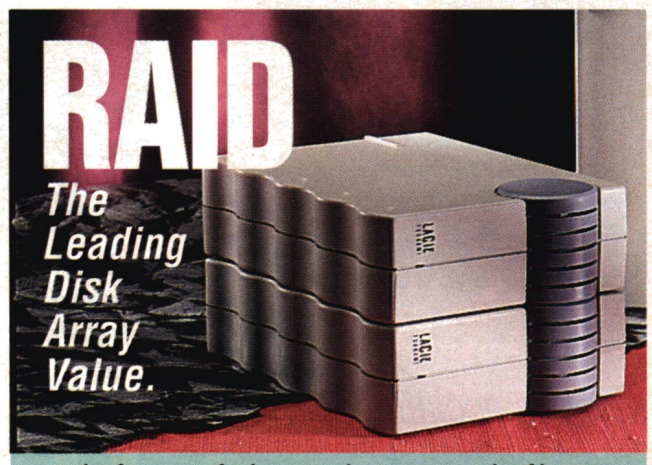

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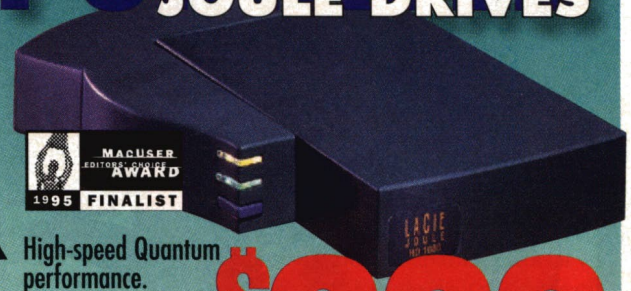

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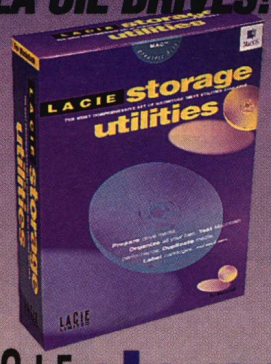

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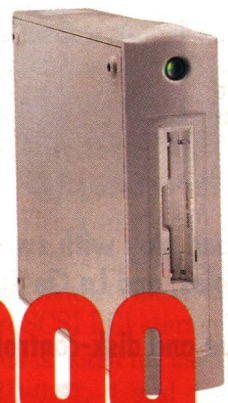

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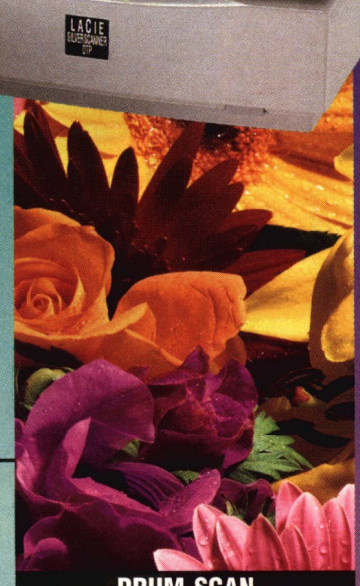
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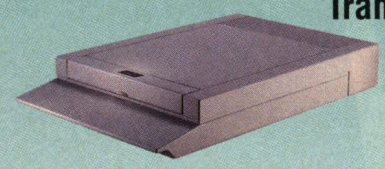

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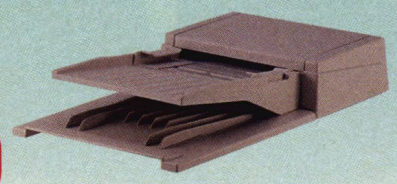

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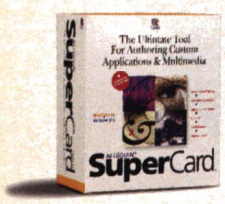

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REMOTE ACCESS

Proliferation of mobile users forces IS management issues

Network managers need to compile a diverse tool kit to support roving workers.

By April Streeter

The advent of mobile computing has allowed hordes of Macintosh PowerBook and Duo owners to work where and when they want, but the freedom to roam — and still connect to the corporate LAN — has added a new management and support burden for network administrators.

Remote access, or the ability for mobile users to connect to LANs and WANs, is on the rise. In a recent report on remote access, San Jose, Calif.-based market research firm Infonetics Research Inc. predicted that companies will increase the number of workers who are allowed remote connectivity by about 30 percent through 1997.

However, providing round-the-clock remote connectivity to segments of a company's user population is not without its cost. Infonetics said that companies will spend about $10,000 per user to provide remote access in 1997.

Two-thirds of that amount can be attributed to hardware and software purchases, phone-line charges, and standard management and training costs. Infonetics said it believes the final third is the "hidden" cost of the time users and managers spend configuring and reconfiguring mobile systems and solving problems when connectivity doesn't work.

Unfortunately, software tools dedicated to troubleshooting and solving mobile problems don't really exist yet, so network administrators must gather diverse tools to provide support. Standard management software, such as the SNMP (Simple Network Management Protocol)-based consoles that help administrators manage LAN-bound devices, can administrate SNMP-equipped remote-access servers, but these programs don't extend to mobile desktops yet, although initiatives are moving in that direction (see story, next page).

In contrast to LAN-based users, who can expect a network manager to drop by and solve network or computer-based problems, mobile workers are separated by a geographical barrier, making them a second priority for management staff.

"For the most part, companies haven't yet officially allocated management power to the support of mobile workers and telecommuters," said Michael Howard, president and research director at Infonetics. "That means that for 95 percent of the time, problem solving is left to the user." That translates into unproductive user time spent chasing down help and management frustration trying to pinpoint and solve problems long-distance.

As the mobile population grows, support needs increase. "The remote-access market is still growing fairly phenomenally," said Brad Baldwin, director of remote access at International Data Corp. in San Jose, Calif. "And all these remote users really throw a monkey wrench into the whole idea of centralized network management."

Advantage = Apple?

In mobile computing, users of Apple portable computers maintain an ease-of-use edge over their Windows-Intel counterparts. Up until Microsoft Corp.'s Windows 95, Windows users were scattered among different programs. Apple Remote Access (ARA), on the other hand, integrates the elements of hardware and software for dial-in remote access.

Consequently, Mac managers probably still have a slightly smaller remote support burden than administrators of Windows users. "I think Macs are field-proven to have a smaller remote-support requirement," said Eli Verschleisser, systems administrator at database vendor Sybase Inc. in Emeryville, Calif. Sybase's 1,100 portable users dial in using the ARA built into Version 2.0 of Timbuktu Pro from Farallon Computing Inc. of Alameda, Calif.

Beyond the basic management features currently supplied with the ARA MultiPort Server, Apple said it will rely on third parties to provide innovation in the area of remote-support tools. "ARA by definition is a technology to do remote access," said Frank Cohen, senior ARA product manager. "For future releases we will address performance, the addition of Point-to-Point Protocol (PPP), security and ease of use. Beyond that it's an opportunity for third parties to provide [other] services on top of the technology." The PPP-enabled upgrade, ARA 3.0, will be ready this year.

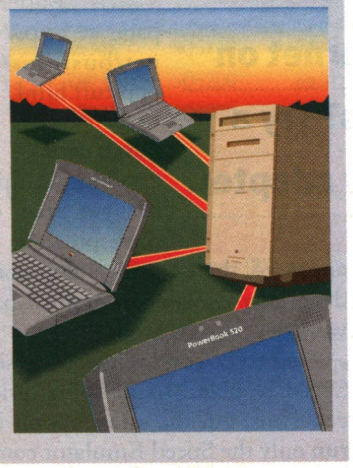
First line of defense

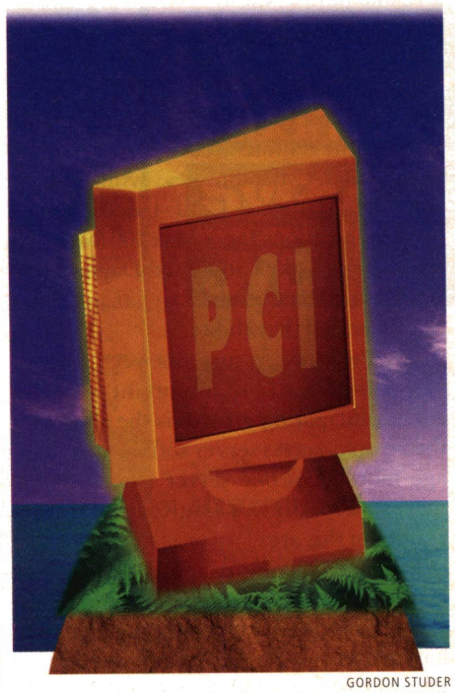
Support and management of mobile users can be divided into two rough categories: tools that help manage and troubleshoot remote-access servers and tools that help manage the remote user's machine. Vendors of remote-access servers have proliferated in the past two years, and most provide some server-management features, as well as a basic level of security via password-protection and authentication features. Extra remote security is available

See Solutions, next page

Four key tips for successful mobile management

1. If managers already rely on an SNMP console for device management, make sure to choose a remote server vendor that supplies an SNMP agent.
2. Try to enlist management backing for remote user training. Research indicates initial training could drastically reduce mobile support costs.
3. If the bulk of management woes concern users' connection issues, look into a utility such as Trilobyte Software Inc.'s ARACommander.
4. If an ad hoc help desk for mobile users is required, Farallon Computing Inc.'s Timbuktu Pro provides remote control of Mac or Windows desktops.





GORDON STUDER

MACINTOUCH

RIC FORD

PCI Macs fare better alone than networked

The PCI-based Macintoshes have been performing well as isolated workstations and rather poorly as network citizens.

Paul Fox is just one of the Apple customers who labored for long hours isolating networking problems on these machines.

Ethernet Built-in 1.0.2 (see 01.08.96, Page 97) eventually fixed failures transferring large files, which would abort the transfer and drop network connections, but this patch did not solve another problem that silently corrupted files during transfer, regardless of size.

One might assume at first that Fox was doing something wrong — running old software, using bad extensions or working on a defective network. His network may be busy, but the solution he found showed that the real problem had nothing to do with his network or procedures: Moving the network cable from Apple's built-in Ethernet controller to an AsanteFast 10/100 PCI Ethernet Adapter (which has its own driver) solved all the problems. At less than $200, the cost of this network adapter was much less than the cost of the time burned up by the bugs.

Although it did not help in this case, it is

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SOLUTIONS

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via add-ons such as SecurID from Cambridge, Mass.-based Security Dynamics Inc. or Factor2 from Cyno Technologies Inc. of San Jose, Calif.

Some servers, such as Burlington, Mass.-based Shiva Corp.'s LanRover and Costa Mesa, Calif.-based Emulex Corp.'s ConnectPlus LT, have an SNMP agent that lets the remote-access server be monitored by SNMP consoles, while others, such as Alameda, Calif.-based Ascend Communications Inc.'s Max 200 (formerly sold by Salt Lake City-based Dayna Communications Inc. as the DaynaLink) have not yet added that ability.

Another key feature not yet provided across-the-board but important for managers anticipating growth is the ability for the remote-access server software to manage more than one server from a single workstation. Shiva's LanRover is a forerunner in this area.

Detailed logging is another important feature in remote-access management software. The more information a manager has on why a remote user's connection fails, the easier it will be to remedy problems, by adding more lines, swapping out defective modems or replacing faulty wiring. Logging is currently more advanced for servers than for remote clients.

"It would be great if there were more client-side logging to tell what happens — ARA's log pretty much just tells you when you've connected and when you've disconnected," said Ashok Kaul, president of APT Communications Inc. in Cambridge, Mass. APT makes Dial Server, an extensive logging management tool.

Bill Hudson, assistant systems administrator for graphic design house Output Technologies Inc. in Kansas City, Mo., agreed that reading the logs generated by his Shiva LanRover is currently his best remote problem-solving tool. Hudson supports about 20 remote users at any given time. "The best we can do for remote management now is continually checking the logs," Hudson said. "That, and relying a lot on the users themselves to diagnose problems."

More power to 'em

Hudson said his company is unique with regard to the amount of user training it provides to mobile neophytes before setting them loose on the road. "In many ways, we are always too busy to provide training, but we make the time anyway," Hudson said. "Our Mac users are fairly savvy, and at a minimum they know how to use remote technology correctly."

According to Infonetics' Howard, making a concerted training effort is a key way to reduce the cost of remote access.

If training is not an immediate option, however, ARACommander from Middletown, Ohio-based Trilobyte Software Inc. is a good way for managers to exercise a little more management control over the remote-access process. The administrator can hide numbers, account names and passwords in one icon. "The most important thing about Commander is that it leaves configuration to the network administrator, who controls handing out icons to the users," said Ron Durritsch, Commander's creator. Durritsch said managers' top request in feature enhancements to Commander is remote file synchronization, which he hopes to add to Version 3.0 of the program, due shortly after Apple's release of ARA 3.0.

From command to control

While Commander is good preventative medicine, Timbuktu 2.0 from Farallon is the closest to a troubleshooting and problem-solving program managers can expect to find at this point. A remote-control program with file transfer, Timbuktu lets a manager easily connect to a user in trouble and control that user's desktop in order to find and eliminate connection problems.

Sybase systems administrator Eli Verschleisser, along with his colleague Michael Donnelly, troubleshoots for hundreds of dial-in users with Timbuktu. "As far as remote support is concerned, Timbuktu is our best tool," he said. "You can fix any of a number of problems just by that ability to control the user's desktop." He said that the program keeps an unbelievable remote log file on each user, which can't be accidentally deleted.

Verschleisser admitted that attempting actual portable system repairs via Timbuktu and a 28.8-Kbps modem can be slow, but considering the paucity of remote-focused tools available, he's pleased with the support Sybase can provide. "Through Timbuktu you can basically reformat and repair [systems remotely]," he said. "It's almost first-level hardware repair. No product will do everything you want remotely, but we couldn't do what we're doing now without it." □

SNMP remote-management possibilities

Strange as it may seem, software drivers that would allow standards-based management of mobile desktops may arrive at the same time as those destined to help manage regular LAN workstations.

While the SNMP has been a standard for network device management for a few years, the Desktop Management Interface (DMI) for workstation management hasn't yet made it out of the developmental starting gate. Apple, along with Microsoft Corp. and Sun Microsystems Inc., only recently pledged support for the DMI agent technology that would allow desktops to be managed via current SNMP consoles.

In the meantime, another group of wireless and mobile product vendors, headed by Xircom Inc., formed the Mobile Management Task Force to develop a MIB (Management Information Base) designed to cope with some of the problems mobile users and managers of the mobile workforce face.

The MIB, designed for TCP/IP networks, will provide configuration and other information about mobile devices but is supposed to be smaller than the DMI to accommodate the small pipe that generally connects mobile users to the LAN.

About a dozen variables in the MIB hold data regarding a mobile user's location, type of device, connection speed, battery power and memory. According to Jim Soriano, Xircom's vice president of product development, a final version of the MIB is now ready to be presented to the Internet Engineering Task Force for review.

Soriano said this MIB draft blends specifications from SNMP and DMI. "It achieves commonality between the two," he said. "We were a little surprised that people felt this MIB was the appropriate place for convergence of the two standards." Thus far, no Mac-specific vendors have joined the Mobile Management Task Force, but Soriano said he expects vendors such as Asanté Technologies Inc. or Dayna Communications Inc. might be interested in looking at the MIB once it's cleared initial IETF hurdles. — By April Streeter

MACINTOUCH

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essential when working on networking problems to get the latest Apple software updates installed on all connected systems, both new and old.

Confused by the plethora of patches, many people seem to be getting caught by freezes, disconnections and failed print jobs caused by running outdated networking and printing software.

Essential components include Network Software Installer 1.5.1, AppleShare Workstation 3.6.1, Open Transport 1.0.8 (for PCI Macs only), Ethernet (Built-in) 1.0.2, and LaserWriter Printing Software 8.3.2 or 7.5.2 Printing Update 1.1.

Newer updates may be available by the time you read this. All the updates are available in Apple's on-line Software Update libraries, including http://www.support.apple.com/wwwdocs/apple_sw_updates.html.

Point to point

Lacking support so far from Apple, the important Point-to-Point Protocol (PPP) has been another sticking point for Mac users. Fortunately, programmer Steve Dagley has done yeoman service in providing and refining FreePPP, a freeware control panel. FreePPP 1.0.4 is the latest and best version, a good choice for dial-up Internet connections on all Macs except 68000-based models, such as the PowerBook 100 and Mac SE, which are not yet supported.

Having problems with Ethernet on PCI Macs? Try a third-party adapter.

A commercial alternative is Hyde Park Software Inc.'s $49.95 MacSLIP 3.0.2, which handles PPP connections as well as the simpler Serial Line Internet Protocol (SLIP) connections. MacSLIP is entirely script-based, making it more complex to set up than FreePPP, but several people have reported good results with it.

More information is available on the Web site at http://www.zilker.net/~hydepark/. Trisoft of Austin, Texas, the primary distributor, can be reached at (512) 472-0744 or (800) 531-5170; fax (512) 473-2122; info@hydepark.com.

More information about PPP history and options on the Mac are available from Travis Butler's Web page at http://www.tfs.net/business/tbutler/pppstuff.html.

Patch picks

Catching up with changes that occurred since previous columns appeared, there are several important updates now available from third-party software developers.

Connectix Corp. released Version 1.1 of Speed Doubler, fixing some serious disk problems, but the safest option is still to run only the Speed Emulator component. RAM Doubler 1.6.1 is also available, addressing problems with PowerBook 190 models and SCSI Manager 4.3, among others. These updates are available through the company's Web site at http://www.connectix.com/.

Symantec Corp.'s Version 3.2.1 patch for Norton Disk Doctor fixes a bug affecting disk volumes configured to expand beyond their current size. An updater is on the Web site at http://www.symantec.com/servsupp/techsupp/resource/resource.html.

Casady and Greene Inc.'s Conflict Catcher was also updated recently, to Version 3.0.4. The company's old Internet domain is in limbo, but a new Web site has the patcher: http://www.holonet.net/casadyg/. □

Comments on MacInTouch are welcome at (508) 897-2621. Please address e-mail to 72511,44 on CompuServe or ricford@macintouch.com on the Internet. The MacInTouch home page is at http://www.macintouch.com/~ricford/.

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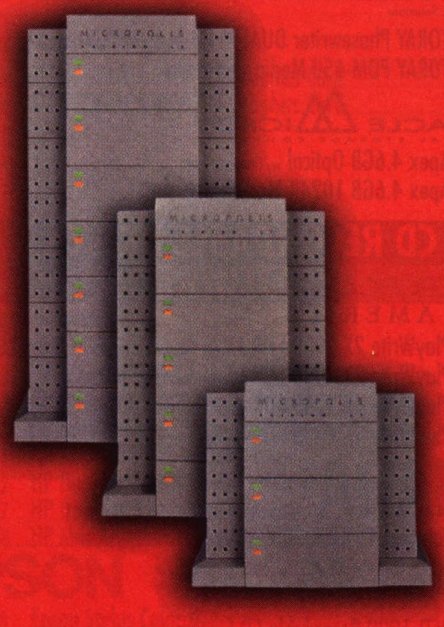

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S106 1020	Sony Multiscan Trinitron 20SF-2	$1855

Portrait Display Labs

P026 1003	Portrait/Pivot 1700 .26 Dot Pitch	$1049
P026 1004	Portrait/Pivot 1700 .28 Dot Pitch	$989

GRAPHIC CARDS

radius

R013 1042	Radius Thunder II GX 1152	$399
R013 1039	Radius Thunder II GX 1600	$699
R013 1059	Radius Thunder IV GX 1600	$1989
R013 1061	Radius Thunder IV GX 1152	$1589
R013 1069	Radius PrecisionColor 8/1600 PCI Card	$479
R013 1070	Radius Thunder 30/1152 PCI Card	$799
R013 1071	Radius Thunder 30/1600 PCI Card	$1189
R013 1072	Radius ThunderColor 30/1152 PCI Card	$1569
R013 1073	Radius ThunderColor 30/1600 PCI Card	$1999
R013 1018	Radius VideoVision Studio 2.5.1	$1999
R013 1026	Radius Spigot Power AV	$599

ATI TECHNOLOGIES INC.

A143 1010	ATI XCLAIMGA 2MB PCI Graphics Card	$359
A143 1009	ATI XCLAIMGA 4MB PCI Graphics Card	$469

TRUEVISION

T040 1001	Targa 2000N (NuBus)	$3695
T043 1001	Targa 2000 (PCI Mac)	$4295

PRINTERS

HEWLETT PACKARD

H047 1030	HP LaserJet 5MP Laser Printer	$1045
H047 1039	HP DeskWriter 600 InkJet Printer	$299
H047 1033	HP DeskWriter 660C Inkjet Printer	$399
H047 1041	HP DeskJet 850C InkJet Printer	$515
H047 1042	HP DeskJet 1600CM/PS PostScript Printer	$1985
H047 1047	HP DeskJet 340 InkJet Printer	$299
H047 1048	HP Mac Adapter for DeskJet 340 InkJet Printer	$29.95

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E047 1018	Epson Stylus Color II	$449
E047 1019	Epson Stylus Color Pro	$599

NEC

N027 1001	NEC SilentWriter Model 640	$699
N027 1006	NEC SuperScript 3000M Color Dye-Sub	$949

SCANNERS

EPSON

E045 1003	Epson ES-1200C Pro-MAC Color Scanner	$1179
E045 1013	Epson ES-1000C MAC Scanner	$735

AGFA

A055 1011	Agfa StudioScan IIsi	$939
A055 1001	Agfa Arcus II	$2195

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H045 1013	HP ScanJet 4s Personal Scanner	$345
H045 1009	HP ScanJet 4c Color/GS Scanner	$949

MICROTEK

M150 1006	Microtek Scanmaker III	$1989
M150 1026	Microtek Scanmaker E3	$399

UMAX

U010 1044	Umax PowerLook Pro w/ Transparency Adapter	$1949
U010 1053	Umax Vista-S8 LE w/ Transparency Adapter	$799
U010 1038	Umax Vista-S8 Pro	$769
U010 1010	Umax Vista-S6 LE	$539

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W010 1026	ArtPad II 4x5 with Erasing Pen	$139	W010 1033	$414
W010 1028	ArtZ II 6x8 with Erasing Pen	$298	W010 1034	$573
W010 1029	ArtZ II 12x12 with Erasing Pen	$425	W010 1035	$699
W010 1030	ArtZ II 12x18 with Erasing Pen	$695	W010 1036	$969

ACCELERATORS

DAYSTAR DIGITAL

D040 1018	DayStar Turbo 040	$699
D040 1057	DayStar 100MHZ PowerCard 601	$969
D040 1043	DayStar 100MHZ PowerPro 601	$1199
D040 1039	DayStar 66MHZ Turbo 601 for IIci	$839
D040 1048	DayStar 100MHZ Turbo 601 for IIci	$1139
D040 1050	DayStar 100MHZ Turbo 601 for IIsi	$1139
D040 1052	DayStar 100MHZ Turbo 601 for Performa, IIvx, IIvi	$1139

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B030 1007	Fast Mac V.34 28.8 Fax/Data Modem	$139

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B020 1001	Best Data 2834FLXMAC 28.8 V.34 External Mac	$165
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G050 1006	TelePort Gold II	$109
G050 1016	TelePort Platinum	$199
G050 1002	PowerPort Mercury for PB 5xx	$325
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TDK

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A120 1003	10BaseT Hub (8 RJ45 ports, 1 AUI & 1 BNC) 10THUB/8	$149
A120 1001	10BaseT Hub (12 RJ45 ports, 1 AUI & 1 BNC) 10THUB/12	$275
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A120 1054	ASANTÉ Ethernet card for Nubus 10BT	$49

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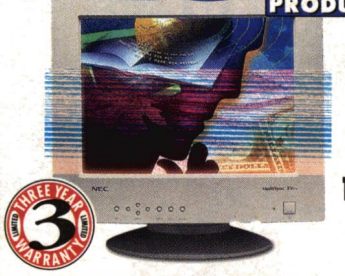

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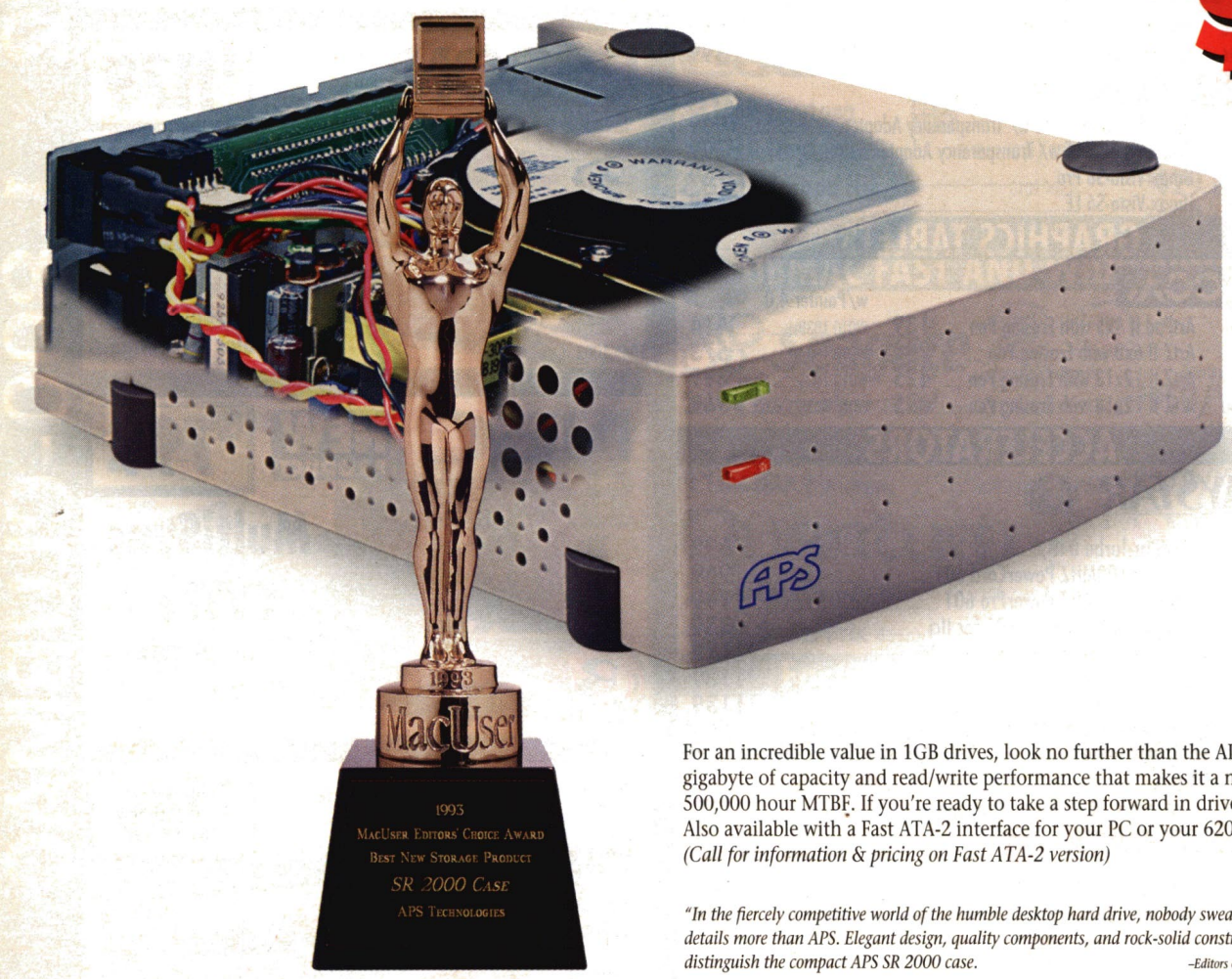

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Model	Capacity/Features	Awards	Internal	SR2000
APS Q 840[3] Quantum 840 Trailblazer	**811MB** 4500 rpm	MacUser ZD LABS ★★★★	$199.95	$299.95
APS I 1080[3] IBM DPES 31080	**1034MB** 5400 rpm		239.95	339.95
APS Q 1080[3] Quantum 1080 Fireball	**1042MB** 5400 rpm	MacWEEK ◆◆◆◆ MacUser ZD LABS ★★★★	269.95	349.95
APS Q 2210[5] Quantum Capella VP32210	**2103MB** 5400 rpm	MacUser ZD LABS ★★★½	629.95	699.95
APS ST 4200[5] Seagate ST 15230N Hawk	**4094MB** 5400 rpm	MacUser ZD LABS ★★★★	949.95	1049.95

APS HIGH-PERFORMANCE SCSI DRIVES

Model	Capacity/Features	Awards	Internal	SR2000
APS MS 2.0[5] Micropolis 4221	**1955MB** 7200 rpm	MacUser ZD LABS ★★★½	$699.95	$799.95
APS Q 2.0[5] Quantum Atlas XP32150	**2050MB** 7200 rpm	MacUser ZD LABS ★★★★	799.95	899.95
APS ST 2.0[5] Seagate ST 32550N Barracuda	**2047MB** 7200 rpm		799.95	899.95
APS MS 4.0[5] Micropolis 3243	**4064MB** 7200 rpm	MacUser ZD LABS ★★★★	1099.95	1199.95
APS Q 4.0[5] Quantum Atlas XP34300	**4101MB** 7200 rpm	MacWEEK ◆◆◆◆ MacUser ZD LABS ★★★★½	1199.95	1299.95
APS ST 4.0[5] Seagate ST 15150N	**4094MB** 7200 rpm	MacUser ZD LABS ★★★½	1299.95	1399.95
APS MS 9.0[5] Micropolis 1991	**8669MB** 5400 rpm		2199.95	*2399.95
APS ST 9.0[5] Seagate ST410800N	**8669MB** 5400 rpm	MacUser ZD LABS ★★★★	2199.95	*2399.95

APS AV SCSI DRIVES

Model	Capacity/Features	Awards	Internal	SR2000
APS MS 2.0AV[5] Micropolis 4221AV	**1955MB** 7200 rpm		$799.95	$899.95
APS MS 4.0AV[5] Micropolis 3243AV	**4064MB** 7200 rpm		1199.95	1299.95
APS MS 9.0AV[5] Micropolis 1991AV	**8669MB** 5400 rpm		2299.95	*2499.95

[1-5] *Denotes length of manufacturer's warranty in years*
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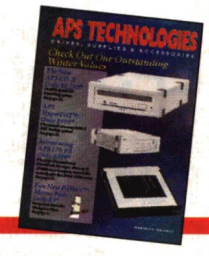

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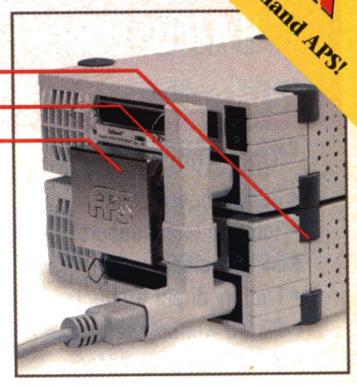

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APS 170 PB[1] Avatar mechanism	**170MB**** Each cartridge only $49.95		$399.95	N/A
APS Q 514[1] Quantum Daytona	**491MB** 4500 rpm, SCSI drive	*while supplies last!*	199.95	N/A
APS Q 810[3] Quantum Europa	**778MB** 3800 rpm, Fast ATA-2 (IDE)		399.95	N/A
APS Q 1.08[3] Quantum Europa	**1037MB** 3800 rpm, Fast ATA-2 (IDE)		499.95	N/A

**Manufacturer's specifications* ***170MB per removable cartridge*

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Model	Capacity/Features	Awards	Internal	SR2000
APS MS 2.0W[5] Micropolis 4221W	**1955MB** 7200 rpm		$799.95	$899.95
APS Q 2.0W[5] Quantum Atlas XP32150W	**2050MB** 7200 rpm		899.95	999.95
APS MS 4.0W[5] Micropolis 3243W	**4064MB** 7200 rpm		1199.95	1299.95
APS Q 4.0W[5] Quantum Atlas XP34300W	**4101MB** 7200 rpm		1299.95	1399.95

APS ADAPTER & ACCELERATOR CARDS

Model	External SCSI Connection	Price
QLogic Fast! SCSI MAC PCI-N Increases the SCSI performance of your PCI Power Mac	HD 50-pin	$299.95
QLogic Fast! SCSI MAC PCI-W For Fast/Wide drives	HD 68-pin	379.95
Silicon Express II For NuBus Quadras & Power Macs only. Fast SCSI-2 accelerator card	DB25 connection	499.95
Silicon Express IV For NuBus Quadras & Power Macs only. Fast/Wide accelerator card & adapter	HD 68-pin	849.95

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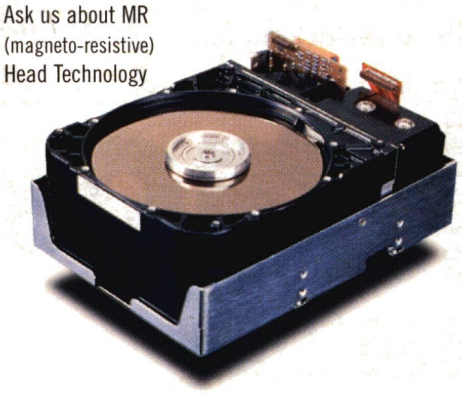

5 YEAR WARRANTY

BRAND/MODEL	CAPACITY		ACCESS	RPM	INTERNAL	EXTERNAL
Conner CFP1080S	1.2GIG	LP	11MS	5400	$ 295	$ 365
Fujitsu m1606s	1.2GIG	LP	10MS	5400	$ 299	$ 369
Seagate ST31230N	1.2GIG	LP	9MS	5400	$ 409	$ 475
Seagate Hawk	2.4GIG	LP	9MS	5400	$ 685	$ 755
Conner CFP2105S	2.1GIG	LP	9MS	5400	$ 665	$ 735
Fujitsu M2915S	2.1GIG	MR	8.9S	7200	$ 699	$ 799
Conner CFP2107S	2.1GIG	LP	8MS	7200	$ 759	$ 829
Quantum Capella	2.2GIG	LP	8.6MS	5400	$ 699	$ 799
Seagate Barracuda 2	2.5GIG	LP	8MS	7200	$ 835	$ 905
Seagate Barracuda 2W	2.5GIG	LP	8MS	7200	$ 939	$ 999
Conner CFP2107W	2.5GIG	LP	8MS	7200	$ 795	$ 895
Fujitsu m2934s	4.2GIG	MR	8MS	7200	$ 1125	$ 1195
Fujitsu m2934W	4.2GIG	MR	8MS	7200	$ 1175	$ 1275
Seagate Barracuda 4	4.1GIG		8MS	7200	$ 1295	$ 1365
Seagate Barracuda 4W	4.1GIG		8MS	7200	$ 1365	$ 1435
Seagate ST15230N	4.3GIG		9MS	5400	$ 999	$ 1099
Conner CFP4207S	4.2GIG		9MS	7200	$ 1045	$ 1115
Conner CFP4207wide	4.2GIG		9MS	7200	$ 1099	$ 1199
Grand Prix XP34301s	4.3GIG		8.6MS	7200	$ 1039	$ 1109
Seagate Elite 9	9.0GIG		11MS	5400	$ 2095	$ 2195
Seagate Elite 9W	9.0GIG		11MS	5400	$ 2295	$ 2395

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Toshiba 3701 6 speed CD Player	External	$ 465
Pioneer 4 speed CD Player	External	$ 295
Panasonic PD 4 speed/650mb Optical	External	$ 535

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- 8 GIG Fast and Wide Raid $ 2799
- 16 GIG Fast and Wide RAID $ 6130

Atto Silicon Express IV	$ 835
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SCSI Expander	$1345

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	CAPACITY	MODEL	EXTERNAL
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	650MB	Panasonic PD	$ 635
	1.3GB	NEC	$ 1195
	1.3GB	Sony 4MB cache	$ 1695
Sony's latest technology →	26GB	Sony Jukebox	$ 4695

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CAPACITY	MODEL	MEDIA	INTERNAL	EXTERNAL
-4GIG	Tandberg Panther	1/4"	$ 479	$ 549
*-8GIG	Sony 5000 DDS-2	4MM	$ 939	$ 999
-14GIG	Exabyte 8505XL	8MM	$ 2065	$ 2125
-10GIG	Exabyte 8505S	8MM	$ 1475	$ 1575
-30GIG	DLT2000XT	1/2"		$ 4195
-40GIG	DLT4000	1/2"		$ 5499
-140GIG	Exabyte-10h Library	8MM		$ 4999
-200GIG	Spectra Logic 4000	4MM		$ 8599
-280GIG	Breeze Hill Library	1/2"		$ 27999

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9 ms Seek	5400 RPM	512K Buffer	5 Year Warranty		
540 MB Fireball				185	245
11 ms Seek	5400 RPM	128K Buffer	3 Year Warranty		
730 MB *Value!*				185	245
11 ms Seek	5400 RPM	128K Buffer	2 Year Warranty		
850 MB *Value!*				205	265
11 ms Seek	5400 RPM	128K Buffer	2 Year Warranty		
1080 MB Fireball				275	335
11 ms Seek	4500 RPM	128K Buffer	3 Year Warranty		
2.2 GB Capella				675	735
8.5ms Seek	5400 RPM	1024K Buffer	5 Year Warranty		
2.0 GB Atlas				785	845
8ms Seek	7200 RPM	1024K Buffer	5 Year Warranty		
4200 MB Grand Prix				985	1095
8.6 ms Seek	7200 RPM	512K Buffer	5 Year Warranty		
4.3 GB Atlas				1075	1135
8ms Seek	7200 RPM	1024K Buffer	5 Year Warranty		

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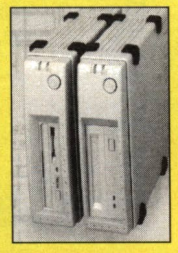
11 ms Seek	4500 RPM	512K Buffer	5 Year Warranty		
2.2 GB UltrStar				755	815
8.5ms Seek	7200 RPM	1024K Buffer	5 Year Warranty		
4.3 GB UltrStar				1355	1405
8ms Seek	7200 RPM	1024K Buffer	5 Year Warranty		
5.3 GB UltrStar				Call	Call
8ms Seek	5400 RPM	1024K Buffer	5 Year Warranty		

SyQuest TECHNOLOGY

Capacity	Model	Seek	External
88 MB	SQ5110C	20 ms	$345
135MB	SQEZ135	13.5ms	225
200 MB	SQ5200	18 ms	395
270 MB	SQ3270	13.5 ms	405



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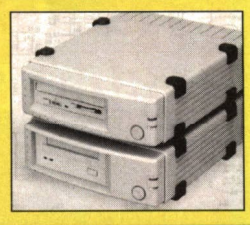
88 MB	SQ800	45
105 MB	SQ310	34
135 MB	SQ135	19
200 MB	SQ2000	70
270 MB	SQ327	58



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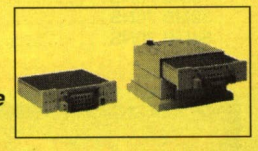

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Capacity	Model	Media	Int.	Ext.
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4- 8GB	CTD8000	4mm	939	989
20-50 GB	4586		2095	2195
Auto Tape Loader				

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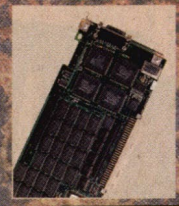

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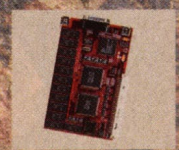

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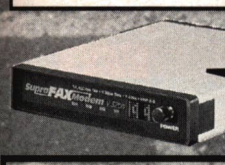

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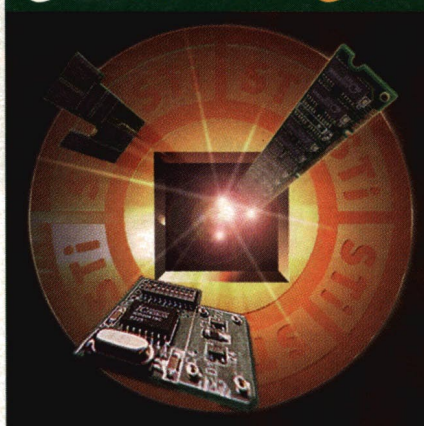

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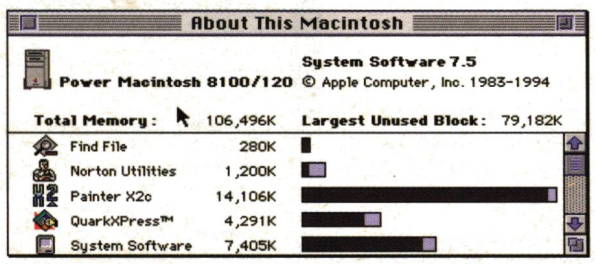

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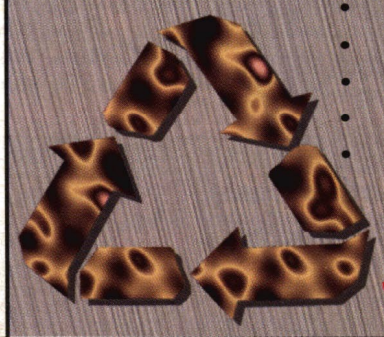

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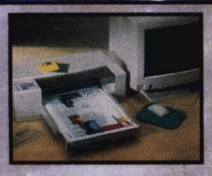

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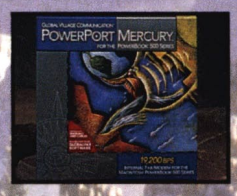

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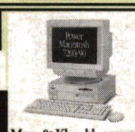

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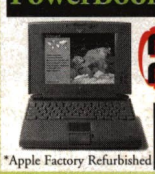

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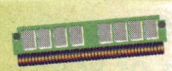

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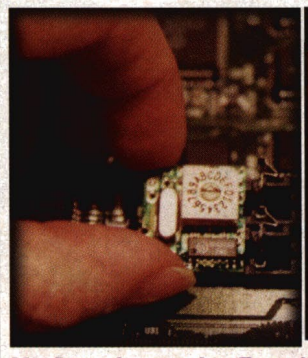

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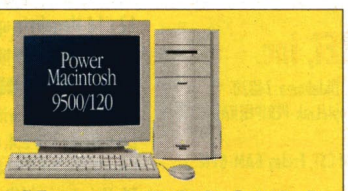

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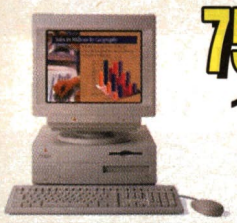

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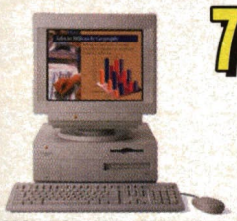

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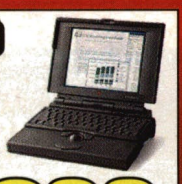

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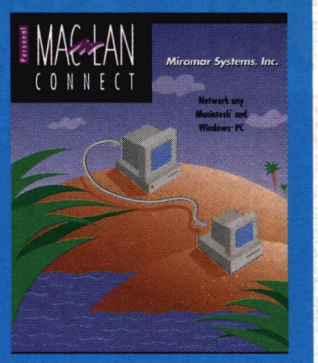

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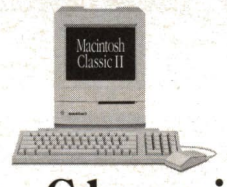

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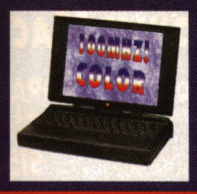

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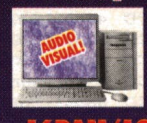

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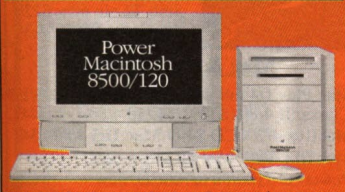

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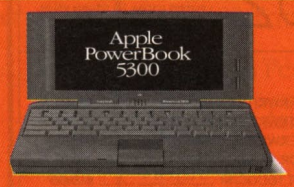

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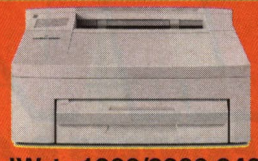

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HP LASERJET 5MP	$985
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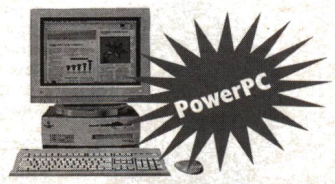

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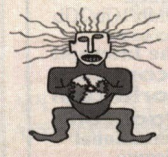

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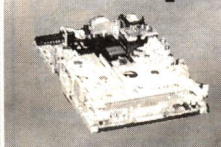

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6205CD 8/1000	1949.
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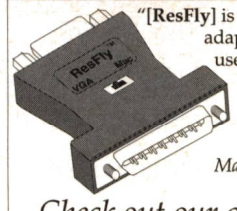

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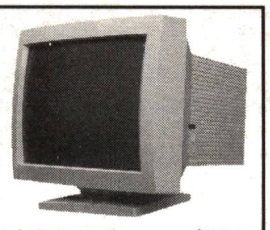

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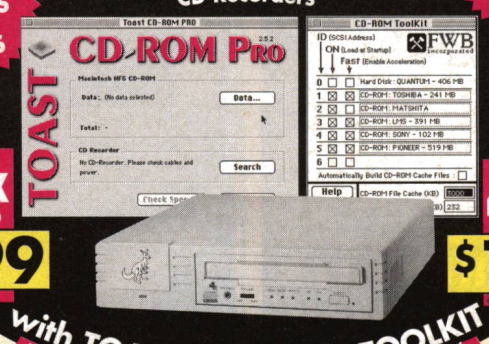

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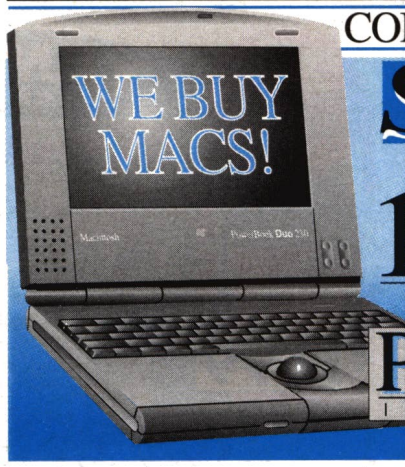

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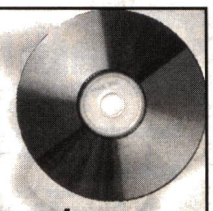

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Talking heads, smiling faces at expo

Despite numerous predictions of Apple's demise, "We're still here," said Apple Americas President Jim Buckley, predicting that the company will move 5 million to 6 million Macs this year.

Although Apple has been the star of past expos, much of the buzz last week was about newcomer Power Computing, whose booth featured a towering video wall and concert-size speakers.

PHOTOGRAPHS BY ED CALDWELL

Achieving warp speed: Visitors to Avid's booth got to stretch, mold and distort their faces using Elastic Reality.

Vendors

From Page 1

"Despite all the bad news — Radius Inc. being clobbered, Apple's woes — people overlook that Apple is a $12 billion company and there are plenty of business opportunities for developers," said Rick Wyand, CEO of STF Technologies Inc. "Plus, the Mac's development and support costs are significantly lower than those for Windows-based machines."

Examples of Mac vendor turnarounds and successes abound:

▶ **Truevision.** The company came to the expo a year ago in a "state of shambles," said CEO Lou Doctor. Then known as RasterOps Corp., it was in the throes of an 11-quarter losing streak, with a bloated sales staff and an unfocused strategy.

This week Truevision of Santa Clara, Calif., will announce its third straight profitable quarter. Its Targa video board sales have never been stronger and its channel strategy is humming. "Our video business on the Mac and Windows side is extremely strong," Doctor said.

▶ **Asanté.** Many in the Mac market had given up on Asanté a year ago when it was beset by management and money troubles. The Sunnyvale, Calif., networking company now claims to be stable and has delivered its Fast Ethernet line. Asanté stock closed at $6.38 per share on Jan. 11, about twice its price in May.

▶ **Visioneer.** The Palo Alto, Calif., company raised $48 million in a December public offering — twice what it expected — and credits PaperPort for Macintosh. Eric Zetlin, product line manager for the 4-year-old company, said, "PaperMax (for Windows) did reasonably well, but PaperPort did gangbusters business."

▶ **Iomega Corp.** Sales of its Zip drive have invigorated the financial fortunes of the Roy, Utah, company. Its stock closed at $43.13 per share on Jan. 11, more than five times its trading price in April, when the Zip shipped.

▶ **DeltaPoint Inc.** The company raised $6.6 million in a December public offering and this month shipped its WebVision Animator multimedia-authoring software. It also plans to move into a larger facility near its Monterey, Calif., headquarters. "We've gone from being the DeltaGraph company to one with a series of Internet products," CEO Ray Kingman said. "We've turned things around."

▶ **Connectix Corp.** The company's sales have mushroomed from $30 million in fiscal 1994 to $50 million last year and are expected to top $100 million in fiscal 1996, said marketing manager Debbie Degutis. She said the San Mateo, Calif.-based developer of RAM Doubler and Speed Doubler has also moved into a bigger building to house its expanding work force and has hired a contractor to handle additional technical support.

▶ **STF.** Since August, the Concordia, Mo., company has overhauled its operations, released a new version of its FaxSTF fax software and beefed up its presence in Europe and Japan, CEO Wyand said. The company has broken even after several losing quarters, he said.

▶ **Pictorius Inc.** After spending part of 1995 grappling with bankruptcy proceedings that "brought the company to its knees," Pictorius is back on track, said Philip Cox, president of the Halifax, Nova Scotia, company.

Cox said Pictorius has collected new funding and revived its development team. Now it is pursuing new markets with releases such as Peregrine, its client-server development tool. The company also plans to ship Windows NT and Windows 95 versions of the tool this year, Cox said.

The Mac industry represented fertile ground for start-ups last year. The most spectacular success was Power Computing Corp. The Round Rock, Texas-based maker of Mac clones went from zero revenues to more than $200 million, making it both profitable and the envy of upstart developers. Power said it will ship 56,000 machines in its fiscal year ending May 31. □

Clifford Colby contributed to this story.

Update

From Page 1

Card incompatibility, faxing and system crashes.

Apple has reportedly been revising the 5300 series' hardware since the CPUs first shipped; in fact, sources said that late last year Apple pulled all 5300 systems out of its "ready to ship" inventory and sent them back to manufacturing for revisions.

"The update is really nice," said Jason O'Grady, principal at Odyssey Systems Corp. of Manayunk, Pa.; O'Grady maintains a Web site (http://www.ogrady.org/5300.html) that covers the 5300 series. "I get a lot fewer crashes [with it]," O'Grady said. "The biggest gripe I hear right now is that people can't download it because all the sites are busy."

Carlton Hogan, a training coordinator at the University of Minnesota in Minneapolis, said: "I'm pretty happy with [the update]. I turned on every single extension I had, and it worked great. I did have a couple of random freezes, but it's definitely a vast improvement."

Recommended for the 5300 and PowerPC-upgraded 500-series PowerBooks, the update comes pre-installed on PowerBook Duo 2300 systems. PowerBook 190 users should call Apple to see if they should upgrade, said Charlie Tritschler, Apple product-line manager for PowerBooks.

"As with any machine, especially [those] with a new architecture, you will see bugs — it's an undeniable fact," Tritschler said. "That's why we wanted to make sure the system software is as current as possible."

The update includes new versions of the Apple Menu Options, Control Strip, Easy Open, PowerBook and Trackpad control panels. New versions of the AppleShare and PC Card Modem extensions, a printing fix, and several new print drivers are expected to solve many serious crashes users have reported.

Mike Thompson, a software engineering manager at a Fortune 500 company, said his company bought several PowerBook 5300ce machines. Thompson said that the 5300 has dragged down productivity. "The situation we're in right now with these computers has gotten a lot of people asking if we should not be moving toward a Windows platform." Thompson said he has been unable to retrieve the update from Apple's sites.

The update can be found at http://www.macos.apple.com/pbupdate.7.5.2 and on America Online, AppleLink, CompuServe and eWorld. PowerBook users can also call (800) 273-4035 and request either a free CD-ROM or a free set of floppy disks with the update. □

3DO MPEGXpress

The 3DO Company at Macworld Expo last week debuted an MPEG video encoding solution. Priced at $11,995 and due by March, MPEGXpress is a complete real-time MPEG-1 encoding system for the Mac. It consists of 3DO Digital Connect, a professional-quality rack-mountable I/O breakout box; two NuBus cards, one for encoding and one for playback; and software.

The 3DO Company of Redwood City, Calif., can be reached at (415) 261-3000 or (800) 336-3506; fax (415) 261-3120; webmaster@3do.com; http://www.3do.com/misc/mpegxpress/. □

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Internet

From Page 1

and a commitment to deliver its full suite of client and server tools to Mac users.

Products the company said it will ship by March include WebStar Commerce Toolkit, a CGI (Common Gateway Interface) for secure commercial transaction processing; Global Stage Chat Server, an Internet Relay Chat system developed and first introduced on the Mac by San Francisco-based Prospero Systems Inc., which was acquired by Quarterdeck last year; Quarterdeck Mail 3.6, a new version of Microsoft Mail for AppleTalk Networks, which the company acquired from the Redmond, Wash.-based giant last year; and a bundle delivering Adobe Systems Inc.'s PageMill to all purchasers of WebStar.

Quarterdeck also announced that it plans to bring WebCompass, a client-side electronic-agent search tool; WebTalk, an Internet telephone product; and InternetSuite, a collection of client tools, to the Mac by summer.

Pricing has not been set for any of Quarterdeck's forthcoming products.

▶ **Natural Intelligence** of Cambridge, Mass., shipped Roaster, its $399 development environment for the Java programming language. Roaster lets developers build Java applets; Roaster Professional, which the company announced but did not demonstrate, will let users build stand-alone desktop applications in Java.

Due in mid-1996, Roaster Pro will add a Java class library for creating desktop applications, a visual screen builder for rapid prototyping and interface construction, and native compilers that build the application into cross-platform code or native code on the platform of choice. A Windows version will ship by year-end.

▶ **FutureWave** of San Diego announced SmartSketch Animator, a program that creates motion files that can be viewed on the Web through a Netscape Navigator plug-in. Both are expected to ship in the second quarter.

▶ **Apple,** with limited fanfare, did make a couple of Internet announcements: It released the first public alpha of Cyberdog, its suite of Internet OpenDoc tools, and proposed its 3DMF (3-D metafile format) as an open standard for the Virtual Reality Modeling Language (VRML).

Cyberdog, which is expected to ship in final form this summer, features parts for Web browsing, FTP, Gopher and other protocols; a universal bookmark tool; an editable log file that mimics the Finder; and mail-enclosure support. According to the company, the final version will provide viewers for all standard file types on the Internet. It will support Java and include a search engine that will be part of the Copland OS. The suite will be bundled with all Macs and distributed separately.

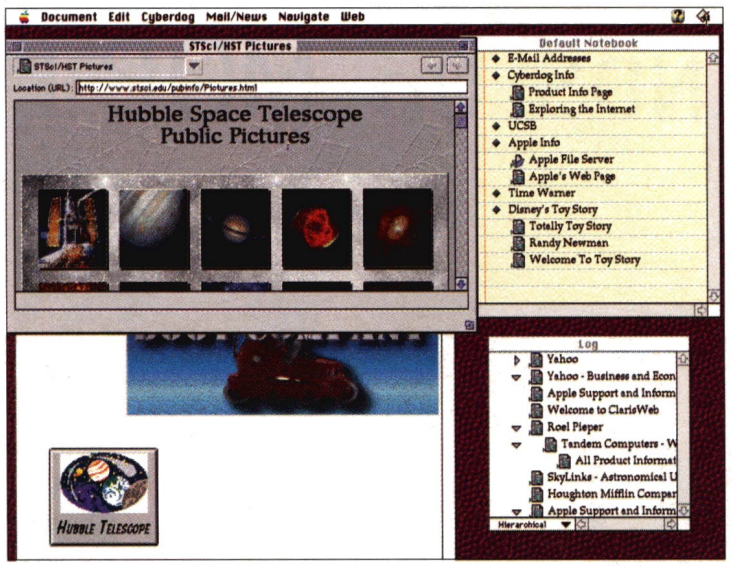
Apple also touted 3DMF as a standard for 3-D graphics exchange on the Internet, as well as for VRML.

The company said 3DMF works with Mac, Windows and Unix and stores more information about a 3-D file than competing formats. It also stores application-specific information about unique attributes such as custom effects.

Apple said it is negotiating with several browser developers to add 3DMF support.

▶ **Other key Internet-related announcements** from the show included a VRML version of Virtus Walkthrough and Virtus Voyager, the first VRML browser for 680x0-based Macs, available free from Virtus Corp. of Cary, N.C. DeltaPoint of Monterey, Calif., showed WebVision Animator, a new authoring environment for interactive Web content (see Page 12). Progressive Networks of Seattle delivered beta versions of its RealAudio server for the Mac. □

More-detailed information about all these products can be found in MacWEEK Online on CompuServe (go macweek), eWorld (shortcut: macweek) and the Web at http://www.zdnet.com/~macweek/.



Apple's Cyberdog, due this summer, is a collection of Internet client tools built in OpenDoc. Several third-party add-ons to the kit are in development now.

UMAX

From Page 1

line memory module) slots will support up to 1 Gbyte of extra memory.

The StormSurge 150 will come standard with high-speed I/O features, including Ultra SCSI and 100BASE T Ethernet. Ethernet 10BASE T and AAUI (Apple attachment unit interface), serial, and ADB connectors will also be included.

Based on Apple's Power Mac 7200 design, the low-cost RipTide will use either a 133- or 150-MHz PowerPC 603ev and offer three PCI slots. RipTide machines will be aimed at the consumer and education markets, UMAX said.

The Taipei, Taiwan-based UMAX Data Systems said it will take an 80.1 percent stake in the start-up; Radius will hold the remaining 19.9 percent share. Sources estimated that UMAX's cost for the deal was "well under $10 million." One source described the UMAX acquisition of Sunnyvale, Calif.-based Radius' clone assets as "a steal."

The new enterprise will expand UMAX's reach in the Mac OS market through Radius' worldwide license. The company will receive Radius' PCI designs, vendor and customer contracts, and clone R&D staff. It will also have exclusive rights to the SuperMac name.

Chang, formerly vice chairman of Fremont, Calif.-based UMAX Technologies Inc., laid out an ambitious timetable for the start-up. He said his company expects to finalize the deal later this month, will enter certification in the first quarter and plans to ship several models by summer.

"UMAX has a lot of experience with [Intel-standard PC] clones, but only with scanners on the Mac side," Chang said. The company will manufacture the systems in Taiwan and put on the finishing touches in the United States. "We will play it conservatively," Chang said.

Analysts expressed concerns that the new venture's machines may be delayed by parts shortages. However, Peter Mehring, UMAX Computer vice president and general manager, said the company will assume Radius' outstanding contracts for processors and application-specific integrated circuits. "The vendors have been very supportive and parts [availability] is not an issue," Mehring said. □

Results

From Page 1

cent, compared with 20.7 percent last quarter and 28.7 percent for the same quarter a year ago. Apple attributed the lower margins to personal computer price wars in the United States and Japan.

The company said net sales and margins had fallen below internal projections. Apple's stock closed at $35 per share, up 75 cents, in trading Jan. 11.

Meanwhile, the parade of executive departures continued, as a source said Apple "cleans house."

Gone are Keith Fox, vice president of the home division; Peter Friedman, vice president and general manager of Apple Internet Services; Jim Groff, vice president of education marketing; Barbara Krause, vice president of corporate communications; and Don Strickland, vice president of business and government sales.

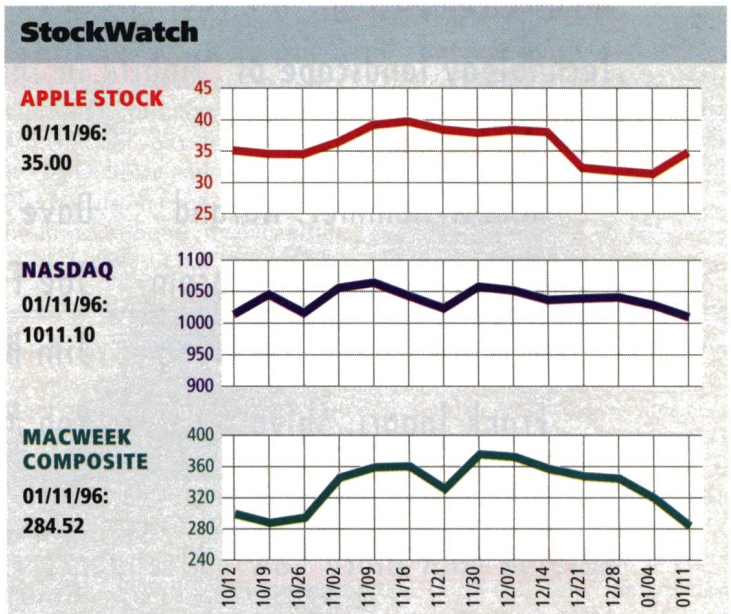
According to sources, the upper-management shake-up is a prelude to a possible dramatic restructuring of the company's product lines.

Apple's near-monthly game of executive musical chairs and its resulting ripples through the rank and file, bewildered and aggravated Macworld attendees and vendors. "I'm tired of Apple's bulimia: a binge-purge management style," said a frustrated third-party developer who asked not to be identified.

"Unfortunately, they lose all the good people. You never know who you're supposed to talk to."

Apple declined to comment. □

StockWatch



	01.11.96 CLOSE	WEEKLY % CHANGE
Apple	35.00	10.89
MacWEEK Composite*	284.52	-11.13
SOFTWARE DEVELOPERS		
Adobe	39.25	-32.91
Caere	7.38	-4.84
CE Software	2.75	15.79
Graphsoft	6.75	-3.57
Insignia	6.25	4.17
Intuit	62.00	-8.82
Macromedia	36.00	-15.29
Microsoft	86.63	-0.86
Novell	14.75	0.00
Oracle	41.88	2.76
Symantec	11.25	-41.94
STORAGE		
Conner	22.00	11.39
Iomega	43.13	-8.24
Maxtor	6.63	0.00
Pinnacle	13.75	-9.84
Quantum	17.88	7.52
Seagate	50.13	8.97
SyQuest	10.38	2.47

	01.11.96 CLOSE	WEEKLY % CHANGE
PERIPHERALS VENDORS		
AmeriQuest	0.88	-22.22
Asanté	6.38	-7.27
Focus	5.81	-9.71
Global Village	14.88	-17.36
HP	79.63	-0.31
QMS	6.00	17.07
Radius	2.25	5.88
Shiva	63.25	-5.95
Tektronix	43.13	-7.01
Truevision	5.00	-1.23
DISTRIBUTORS		
CompUSA	30.13	-6.95
IE	5.75	-4.17
Merisel	5.63	25.00
Tech Data	12.88	-13.45
INDUSTRY INDICATORS		
Compaq	46.88	1.90
IBM	87.25	0.43
Intel	56.88	-1.09
Motorola	50.13	-14.50
SGI	24.50	4.81
NASDAQ	1011.10	-1.82

**The MacWEEK Composite is calculated by adding the stock prices of the following companies: Apple, Adobe, Asanté, Caere, CE Software, Global Village, Intuit, Macromedia, Radius, Shiva, SyQuest and Truevision. Source: Nordby International Inc.*

ZD Net/Mac this week

ZDNet Macworld Expo in retrospect

The San Francisco Macworld Expo is over, but you can still catch up on last week's events, news and product announcements via on-line expo coverage from MacWEEK and MacUser. Here you'll find hard news, commentary, show-floor buzz and candid photos. Daily expo reports from both publications are available on our CompuServe and eWorld services and on the Web at http://www.zdnet.com/~macweek/mw_reports/index.html and http://www.zdnet.com/~macuser/expo_0196/expo-reports.html.

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NEXT WEEK

MacWEEK Guide to Digital Video: A look at in-house video production in corporate America. Plus a Buyers Guide to Mac CPUs.

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- What are your experiences upgrading software and hardware? Did you choose to upgrade, replace or stick with what you have?
- If you run a small business, what type of low-end e-mail packages are you using? Are they adequate or do you feel like something is missing?

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- Ray Dream Studio
- Big Business 1.0.2
- Personal Maclan Connect 5.51
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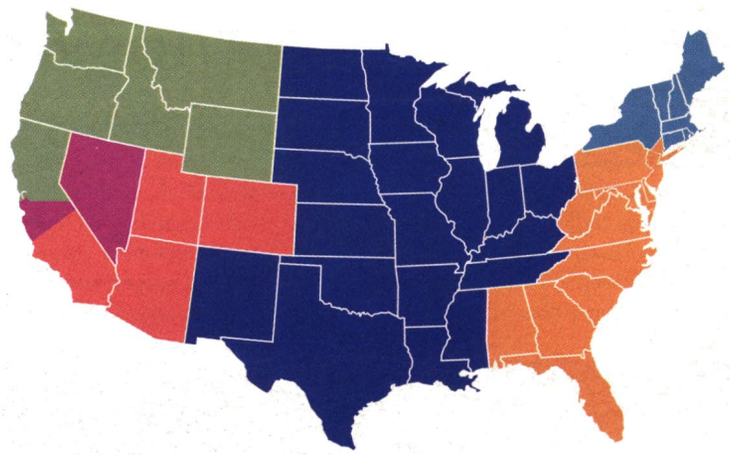

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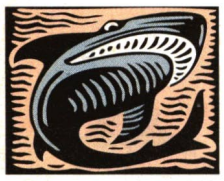

Sniffing the winds of change

Macworld Expo time, and the living was easy — that is, if you happen to enjoy scrambling through an endless succession of snowstorms and airports, then clawing through huddled masses yearning to breathe in the heady aroma of their fellow Macophiles.

One individual who wasn't adding to the sights and smells at last week's expo was Michael Spindler. Apple's reluctant CEO even bowed out as speaker at a Newton developers conference in Cupertino, but his speech writer proved to be more than an able replacement.

Smells like Novell

Also thinning the atmosphere in Moscone Center somewhat was the vacuum left by Novell, which yanked its booth at the last moment.

While the ski slopes of its native Utah may be inviting, the Knife's minions suggest the networking giant was drawn away by more mundane concerns: shaking off its erstwhile WordPerfect software division like a bad habit. Sources maintain that Novell is still fielding offers.

Cutting loose

And speaking of vacuums, one of the more ghoulish pursuits among vendors at the expo was guessing the final body count after Apple's Bolsheviks complete their forthcoming purge. As the week progressed, figures ranged from 2,000 to 4,000, but the votes were nearly unanimous that Spindler should top the list.

Meanwhile, Radius has found a new cost-cutting measure, namely, switching off the lights throughout most of its Sunnyvale, Calif., digs. The Knife's sources wonder whether toilet paper will be the next item to be rationed at the struggling company.

Cooking with gas

On the other end of the energy spectrum, the inevitable swarms of Internet developers were shedding plenty of light and heat at Macworld. Not satisfied with brewing up a Java development environment for the Mac, Natural Intelligence is planning to serve a side order of OpenDoc parts based on Sun's Web-centric component technology, the Knife's informants claim.

Meanwhile, Symantec, suffering an acute case of parts envy after failing to buy Natural Intelligence's Roaster, hastily whipped up its own Java programming language bearing the bohemian moniker Symantec Café. Unfortunately, the company's handouts on the new product included a screen shot that looked suspiciously like old flame Roaster.

Negotiations are reportedly percolating between venerable electronic dating service America Online and hot young upstart Netscape. Web buffs maintain that AOL is on the verge of wiring down a licensing agreement that will let it use the Netscape Navigator Web browser with its service.

Microsoft's dirty laundry

Moving from the quick to the dead: As most of the Knife's devoted readers know, all the caffe lattes in Seattle couldn't perk up Microsoft's somnambulant Power Mac versions of Excel and Word.

The Knife's legion of sleuths assure him that stronger medicine is on the way, however: Suitably appalled that users of its "productivity" software had to wait more than 30 seconds for the programs to launch, the gang in Redmond sat down with Apple's system software mavens to root out the problem.

The Knife is happy to unmask the villain in this ordeal, specifically a caching problem in System 7.5.2 that caused a wait state. Fear not, Mac faithful, the Knife's sources assure him that the offending code will be fixed in System 7.5.3, resulting in Word and Excel launch times that are four times faster with Virtual Memory on. □

Radius may be poised to sell off its bathroom fixtures, but perhaps an attractive MacWEEK mug will do in a pinch. Let your rumors flow freely! Pass them along to the Knife at (415) 243-3544; fax (415) 243-3651; mac_the_knife@macweek.com.

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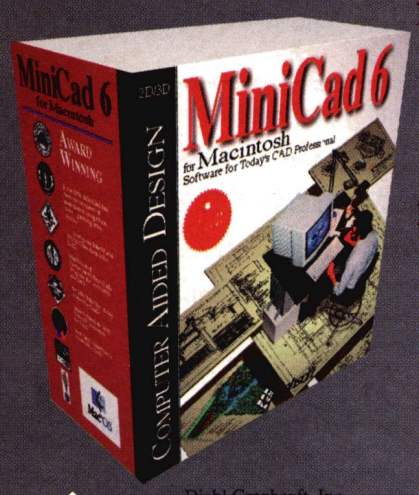

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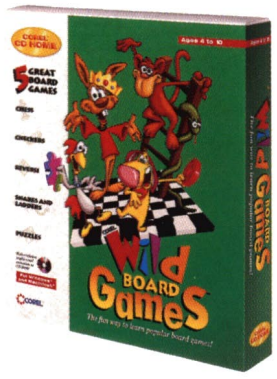

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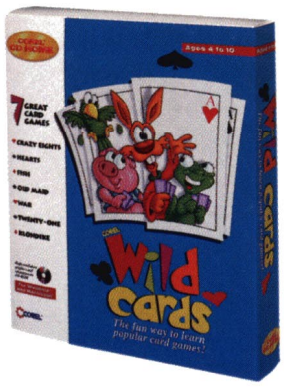

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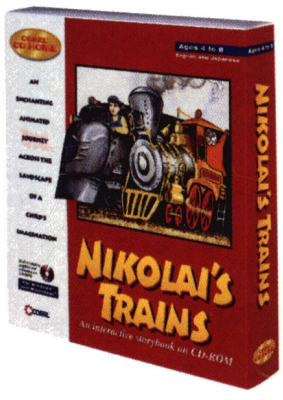

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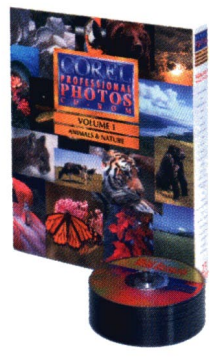

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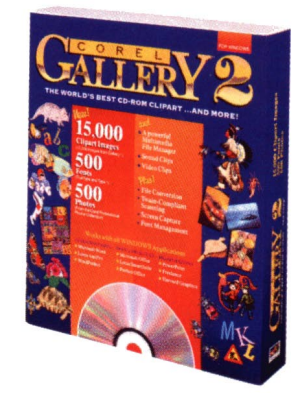

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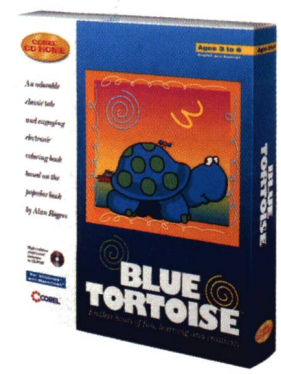

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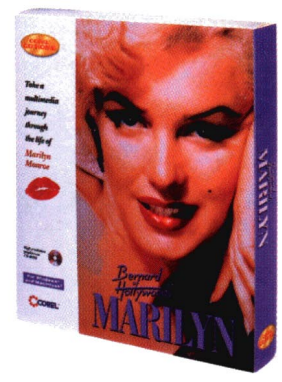

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